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GENERAL INFORMATION

This Airport/Facility Directory is a Civil Flight Information Publication published and distributed every eight weeks by the FAA Department of Transportation, National Aeronautical Navigation Services, Silver Spring, Maryland 20910. It is designed for use with Aeronautical Charts covering the conterminous United States, Puerto Rico and the Virgin Islands.

This directory contains all open to the public airports, seaplane bases and heliports, military facilities, and selected private use facilities specifically requested by the Department of Defense (DoD) for which a DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures Publication. Additionally, this directory contains communications data, navigational facilities and certain special notices and procedures.

Military data contained within this publication is provided by the National Geospatial-Intelligence Agency and is intended to provide reference data for military and/or joint civil/military airports. Not all military data contained in this publication is applicable to civil users.

CORRECTIONS, COMMENTS, AND/OR PROCUREMENT

CRITICAL information such as equipment malfunction, abnormal field conditions, hazards to flight, etc., should be reported as soon as possible to the nearest FAA facility, either in person or by reverse charge telephone call.

FOR AIRPORT SUPPLEMENT REVISIONS FORM VISIT WEB SITE: <http://nfdc.faa.gov/portal/airportchanges.do>

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NOTICE: Changes must be received by the Aeronautical Information Services as soon as possible but not later than the "cut-off" dates listed below to assure publication on the desired effective date.

| Effective Date | Airport Information | Airspace Information* |
|----------------|---------------------|-----------------------|
| | Cut-off date | Cut-off date |
| 23 Sep 10 | 11 Aug 10 | 22 Jul 10 |
| 18 Nov 10 | 6 Oct 10 | 16 Sep 10 |
| 13 Jan 11 | 1 Dec 10 | 11 Nov 10 |
| 10 Mar 11 | 26 Jan 11 | 6 Jan 11 |
| 5 May 11 | 23 Mar 11 | 3 Mar 11 |
| 30 Jun 11 | 18 May 11 | 28 Apr 11 |

*Including changes to preferred routes and graphic depictions on charts.

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Frequently asked questions (FAQs) are answered on our website at <http://aeronav.faa.gov>.
See the FAQs prior to contact via toll free number.

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Telephone 1-800-638-8972
Fax 301-436-6829
or any authorized chart agent.

New or Changed Information—To alert users of new information or changes to information from the previous issue, a vertical line will be portrayed in the outside margin and extending the full length of the new and/or revised data. This will not apply to the front cover or the airport/facility directory listing.

This Airport/Facility Directory comprises part of the following sections of the United States Aeronautical Information Publication (AIP): GEN, ENR and AD.

GENERAL INFORMATION

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ABBREVIATIONS

The following abbreviations/acronyms are those commonly used within this Directory. Other abbreviations/acronyms may be found in the Legend and are not duplicated below. The abbreviations presented are intended to represent grammatical variations of the basic form. (Example—"req" may mean "request", "requesting", "requested", or "requests").

| | | | |
|--------|---|--------|---------------------------------------|
| AAF | Army Air Field | byd | beyond |
| AB | Airbase | C | Commercial Circuit (Telephone) |
| abv | above | CGAF | Coast Guard Air Facility |
| ACC | Air Combat Command; Area Control Center | CGAS | Coast Guard Air Station |
| acft | aircraft | CIV | Civil |
| ADCC | Air Defense Control Center | clsd | closed |
| AER | approach end rwy | comd | command |
| AFB | Air Force Base | CONUS | Continental United States |
| AFHP | Air Force Heliport | CSTMS | Customs |
| afld | airfield | ctc | contact |
| AFOD | US Army Flight Operations Detachment | ctl | control |
| AFRC | Armed Forces Reserve Center/Air Force Reserve Command | dalgt | daylight |
| AFSS | Automated Flight Service Station | Dec | December |
| AG | Agriculture | DIAP | DoD Instrument Approach Procedure |
| A-GEAR | Arresting Gear | DoD | Department of Defense |
| AGL | above ground level | DSN | Defense Switching Network (Telephone) |
| AHP | Army heliport | dsplcd | displaced |
| ALS | Approach Light System | durn | duration |
| alt | altitude | eff | effective |
| AMC | Air Mobility Command | emerg | emergency |
| ANGS | Air National Guard Station | EOR | End of Runway |
| apch | approach | ETA | Estimated Time of Arrival |
| Apr | April | ETD | Estimated Time of Departure |
| APU | Auxiliary Power Unit | exc | except |
| ARB | Air Reserve Base | extd | extend |
| arpt | airport | FBO | fixed-base operator |
| ARS | Air Reserve Station | Feb | February |
| AS | Air Station | fld | field |
| ASDE-X | Airport Surface Detection Equipment—Model X | FLIP | Flight Information Publication |
| ASU | Aircraft Starting Unit | flt | flight |
| ATC | Air Traffic Control | flw | follow |
| ATCT | Airport Traffic Control Tower | Fri | Friday |
| Aug | August | FSS | Flight Service Station |
| AUW | All Up Weight (gross weight) | GA | glide angle |
| avbl | available | GCA | Ground Controlled Approach |
| bcn | beacon | GS | glide slope |
| blo | below | haz | hazard |
| | | HQ | Headquarters |

CONTINUED ON NEXT PAGE

GENERAL INFORMATION

3

CONTINUED FROM PRECEDING PAGE

| | | | |
|-------|---|----------|---|
| hr | hour | npi | non precision instrument |
| IAP | Instrument Approach Procedure | NS ABTMT | Noise Abatement |
| ICAO | International Civil Aviation Organization | NSTD | nonstandard |
| IFR | Instrument Flight Rules | ntc | notice |
| ILS | Instrument Landing System | obsn | observation |
| IM | Inner Marker | Oct | October |
| IMG | Immigration | OLF | Outlying Field |
| incr | increase | opr | operate, operator, operational |
| indef | indefinite | ops | operations |
| ints | intensity | OTS | out of service |
| invo | in the vicinity of | ovrn | overrun |
| IMC | Instrument Meteorological Conditions | PAEW | personnel and equipment working |
| Jan | January | pat | pattern |
| JASU | Jet Aircraft Starting Unit | p-line | power line |
| JOAP | Joint Oil Analysis Program | PMSV | Pilot-to-Metro Service |
| JOSAC | Joint Operational Support Airlift Center | POL | Petrol, Oils and Lubricants |
| JRB | Joint Reserve Base | PPR | prior permission required |
| Jul | July | PRM | Precision Runway Monitoring |
| Jun | June | PTD | Pilot to Dispatcher |
| Kt | Knots | RAMCC | Regional Air Movement Control Center |
| LAA | Local Airport Advisory | req | request |
| LAHSO | Land and Hold Short Operations | rgt tfc | right traffic |
| lbs | pounds | RON | Remain Overnight |
| ldg | landing | rqr | require |
| Igtd | lighted | rstd | restricted |
| Igts | lights | RSRS | reduced same runway separation |
| LMM | Compass locator at Middle Marker ILS | rwy | runway |
| LOC | Localizer | Sat | Saturday |
| LOM | Compass locator at Outer Marker ILS | SELF | Strategic Expeditionary Landing Field |
| ltd | limited | Sep | September |
| MACC | Military Area Control Center | SFA | Single Frequency Approach |
| Mar | March | sfc | surface |
| MCAF | Marine Corps Air Facility | SFRA | Special Flight Rules Area |
| MCALF | Marine Corps Auxiliary Landing Field | SOAP | Spectrometric Oil Analysis Program |
| MCAS | Marine Corps Air Station | SOF | Supervisor of Flying |
| MCB | Marine Corps Base | SPB | Seaplane Base |
| med | medium | SR | sunrise |
| METRO | Pilot-to-Metro voice call | SS | sunset |
| Mil | military | std | standard |
| min | minute | Sun | Sunday |
| MLS | Microwave Landing System | svc | service |
| MM | Middle Marker of ILS | tfc | traffic |
| Mon | Monday | thld | threshold |
| MP | Maintenance Period | Thu | Thursday |
| MSL | mean sea level | tkf | take-off |
| MSAW | minimum safe altitude warning | tmpry | temporary |
| NAAS | Naval Auxiliary Air Station | tran | transient |
| NADC | Naval Air Development Center | Tue | Tuesday |
| NADEP | Naval Air Depot | twr | tower |
| NAEC | Naval Air Engineering Center | twy | taxiway |
| NAES | Naval Air Engineering Station | UC | Under Construction |
| NAF | Naval Air Facility | USA | United States Army |
| NALCO | Naval Air Logistics Control Office | USAF | United States Air Force |
| NALO | Navy Air Logistics Office | USCG | United States Coast Guard |
| NALF | Naval Auxiliary Landing Field | USN | United States Navy |
| NAS | Naval Air Station | V | Defense Switching Network (telephone, formerly AUTOVON) |
| NAWC | Naval Air Warfare Center | VFR | Visual Flight Rules |
| NAWS | Naval Air Weapons Station | VIP | Very Important Person |
| ngt | night | VMC | Visual Meteorological Conditions |
| NOLF | Naval Outlying Field | Wed | Wednesday |
| Nov | November | wx | weather |

SAMPLE

1 2 3 4 5 6 7 8

CITY NAME
AIRPORT NAME (ALTERNATE NAME) (LTS) (KLTS) CIV/MIL 3 N UTC-6(-5DT) N34°41.93' W99°20.20' JACKSONVILLE

200 B S4 FUEL 100 OX 1 TPA-1000(800) AOE Class IV, ARFF Index A NOTAM FILE ORL Not insp. COPTER
 11 12 13 14 15 16 17 18 19 20 H-46, L-19C IAP, DIAP, AD

21 → RWY 18-36: H12004X200 (ASPH-CONC-GRVD)
 S-90, D-160, 2D-300 PCN 80 R/B/W/T HIRL CL
 RWY 18: LDIN: MALSF. TDZL. REIL. PAPI(P2R)—GA 3.0° TCH 36'.
 Thld dsplcd 300'. Trees. Rgt tfe. 0.3% up.
 RWY 36: ALSF1. 0.4% down.
 RWY 09-27: H6000X150 (ASPH) MIRL
 RWY 173-353: H3515X150 (ASPH-PFC) AUW PCN 59 F/A/W/T

LAND AND HOLD SHORT OPERATIONS

| LANDING | HOLD SHORT POINT | DIST AVBL |
|---------|------------------|-----------|
| RWY 18 | 09-27 | 6500 |
| RWY 36 | 09-27 | 5400 |

RUNWAY DECLARED DISTANCE INFORMATION

RWY 18: TORA-12004 TODA-12704 ASDA-11704 LDA-11504
 RWY 36: TORA-12004 TODA-12004 ASDA-12004 LDA-11704

22 → **ARRESTING GEAR/SYSTEM**
 RWY 18 → HOOK E5 (65' OVRN) BAK-14 BAK-12B (1650')
 BAK-14 BAK-12 (B) (1087') HOOK E5 (74' OVRN) ← RWY 36

23 → **MILITARY SERVICE: A-GEAR** E-5 connected on dep end, disconnected on apch end. JASU 3(AM32A-60) 2(A/M32A-86)

24 →

25 → FUEL J8(Mil) (NC-100, A) FLUID W SP PRESAIR LOX ← 26

OIL O-128 TRAN ALERT Avbl 1300-0200Z†, svc limited weekends.

27 28

29 → **AIRPORT REMARKS:** Special Air Traffic Rules—Part 93, see Regulatory Notices. Attended 1200-0300Z†. Parachute Jumping. Deer invov arpt. Heavy jumbo jet training surface to 9000'. Twy A clsd indef. Flight Notification Service (ADCUS) avbl.

30 → **MILITARY REMARKS:** ANG PPR/Official Business Only. Base OPS DSN 638-4390, C503-335-4222. Ctc Base OPS 15 minutes prior to ldg and after dep. Limited tran parking.

31 → **WEATHER DATA SOURCES:** AWOS-1 120.3 (202) 426-8000. LLWAS.

32 → **COMMUNICATIONS:** SFA ATIS 127.25 273.5 (202) 426-8003 UNICOM 122.95 PTD 372.2
 NAME FSS (ORL) on arpt. 123.65 122.65 122.2
 NAME RCO 112.2T 112.1R (NAME RADIO)

Ⓡ NAME APP/DEP CON 128.35 257.725 (1200-0400Z†)
 TOWER 119.65 255.6 (1200-0400Z†) GND CON 121.7 GCO 135.075 (ORLANDO CLNC) CLNC DEL 125.55
 NAME COMD POST (GERONIMO) 311.0 321.4 6761 PMSV METRO 239.8 NAME OPS 257.5

33 → **AIRSPACE:** CLASS B See VFR Terminal Area Chart.

34 → **RADIO AIDS TO NAVIGATION:** NOTAM FILE ORL. VHF/DF etc FSS.
 (H) VORTAC 112.2 MCO Chan 59 N28°32.55' W81°20.12' at fld. 1110/8E.
 (H) TACAN Chan 29 CBU (109.2) N28°32.65' W81°21.12' at fld. 1115/8E.
 HERNY NDB (LOM) 221 OR N28°37.40' W81°21.05' 177° 5.4 NM to fld.
 ILS/DME 108.5 I-ORL Chan 22 Rwy 18. Class IIE. LOM HERNY NDB.
 ASR/PAR (1200-0400Z†)

35 → **COMM/NAV/WEATHER REMARKS:** Emerg frequency 121.5 not avbl at twr.

• • • • •

HELIPAD H1: H100X75 (ASPH)
 HELIPAD H2: H60X60 (ASPH)
 HELIPORT REMARKS: Helipad H1 lctd on general aviation side and H2 lctd on air carrier side of arpt.

• • • • •

187 TPA 1000(813)
 WATERWAY 15-33: 5000X425 (WATER)
 SEAPLANE REMARKS: Birds roosting and feeding areas along river banks. Seaplanes operating adjacent to SW side of arpt not visible from twr and are required to ctc twr.

1

All bearings and radials are magnetic unless otherwise specified.
 All mileages are nautical unless otherwise noted.
 All times are Coordinated Universal Time (UTC) except as noted.
 All elevations are in feet above/below Mean Sea Level (MSL) unless otherwise noted.
 The horizontal reference datum of this publication is North American Datum of 1983 (NAD83), which for charting purposes is considered equivalent to World Geodetic System 1984 (WGS 84).

10

SKETCH LEGEND

RUNWAYS/LANDING AREAS

| | |
|------------------------------------|--|
| Hard Surfaced | |
| Metal Surface | |
| Sod, Gravel, etc. | |
| Light Plane, | |
| Ski Landing Area or Water | |
| Under Construction | |
| Closed | |
| Helicopter Landings Area | |
| Displaced Threshold | |
| Taxiway, Apron and Stopways . . | |

MISCELLANEOUS BASE AND CULTURAL FEATURES

| | |
|-----------------------------------|--|
| Buildings | |
| Power Lines | |
| Fence | |
| Towers | |
| Tanks | |
| Oil Well | |
| Smoke Stack | |
| Obstruction | |
| Controlling Obstruction | |
| Trees | |
| Populated Places | |
| Cuts and Fills | |
| Cliffs and Depressions | |
| Ditch | |
| Hill | |

RADIO AIDS TO NAVIGATION

| | | | |
|-------------------|--|-------------------|--|
| VORTAC | | VOR | |
| VOR/DME | | NDB | |
| TACAN | | NDB/DME | |

MISCELLANEOUS AERONAUTICAL FEATURES

| | |
|--------------------------|--|
| Airport Beacon | |
| Wind Cone | |
| Landing Tee | |
| Tetrahedron | |
| Control Tower | |

APPROACH LIGHTING SYSTEMS

A dot "•" portrayed with approach lighting letter identifier indicates sequenced flashing lights (F) installed with the approach lighting system e.g., (A1) Negative symbology, e.g., (A1) indicates Pilot Controlled Lighting (PCL).

| | |
|--|--|
| Runway Centerline Lighting | |
| (A) Approach Lighting System ALSF-2 . . | |
| (A1) Approach Lighting System ALSF-1 . . | |
| (A2) Short Approach Lighting System SALS/SALSF | |
| (A3) Simplified Short Approach Lighting System (SSALR) with RAIL | |
| (A4) Medium Intensity Approach Lighting System (MALS and MALSF)/(SSALS and SSALF) | |
| (A5) Medium Intensity Approach Lighting System (MALSR) and RAIL | |
| (Y) Omnidirectional Approach Lighting System (ODALS) | |
| (D) Navy Parallel Row and Cross Bar . . | |
| (F) Air Force Overrun | |
| (V) Visual Approach Slope Indicator with Standard Threshold Clearance provided | |
| (V2) Pulsating Visual Approach Slope Indicator (PVASI) | |
| (V3) Visual Approach Slope Indicator with a threshold crossing height to accommodate long bodied or jumbo aircraft | |
| (V4) Tri-color Visual Approach Slope Indicator (TRCV) | |
| (V5) Approach Path Alignment Panel (APAP) | |
| (P) Precision Approach Path Indicator (PAPI) | |

LEGEND

This directory is a listing of data on record with the FAA on all open to the public airports, military facilities and selected private use facilities specifically requested by the Department of Defense (DoD) for which a DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures Publication. Additionally this listing contains data for associated terminal control facilities, air route traffic control centers, and radio aids to navigation within the conterminous United States, Puerto Rico and the Virgin Islands. Joint civil/military and civil airports are listed alphabetically by state, associated city and airport name and cross-referenced by airport name. Military facilities are listed alphabetically by state and official airport name and cross-referenced by associated city name. Navajids, flight service stations and remote communication outlets that are associated with an airport, but with a different name, are listed alphabetically under their own name, as well as under the airport with which they are associated.

The listing of an open to the public airport in this directory merely indicates the airport operator's willingness to accommodate transient aircraft, and does not represent that the facility conforms with any Federal or local standards, or that it has been approved for use on the part of the general public. Military and private use facilities published in this directory are open to civil pilots only in an emergency or with prior permission. See Special Notice Section, Civil Use of Military Fields.

The information on obstructions is taken from reports submitted to the FAA. Obstruction data has not been verified in all cases. Pilots are cautioned that objects not indicated in this tabulation (or on the airports sketches and/or charts) may exist which can create a hazard to flight operation. Detailed specifics concerning services and facilities tabulated within this directory are contained in the Aeronautical Information Manual, Basic Flight Information and ATC Procedures.

The legend items that follow explain in detail the contents of this Directory and are keyed to the circled numbers on the sample on the preceding pages.

① CITY/AIRPORT NAME

Civil and joint civil/military airports and facilities in this directory are listed alphabetically by state and associated city. Where the city name is different from the airport name the city name will appear on the line above the airport name. Airports with the same associated city name will be listed alphabetically by airport name and will be separated by a dashed rule line. A solid rule line will separate all others. FAA approved helipads and seaplane landing areas associated with a land airport will be separated by a dotted line. Military airports are listed alphabetically by state and official airport name.

② ALTERNATE NAME

Alternate names, if any, will be shown in parentheses.

③ LOCATION IDENTIFIER

The location identifier is a three or four character FAA code followed by a four-character ICAO code assigned to airports. ICAO codes will only be published at joint civil/military, and military facilities. If two different military codes are assigned, both codes will be shown with the primary operating agency's code listed first. These identifiers are used by ATC in lieu of the airport name in flight plans, flight strips and other written records and computer operations. Zeros will appear with a slash to differentiate them from the letter "O".

④ OPERATING AGENCY

Airports within this directory are classified into two categories, Military/Federal Government and Civil airports open to the general public, plus selected private use airports. The operating agency is shown for military, private use and joint civil/military airports. The operating agency is shown by an abbreviation as listed below. When an organization is a tenant, the abbreviation is enclosed in parenthesis. No classification indicates the airport is open to the general public with no military tenant.

| | | | |
|---------|---------------------------------------|------|---|
| A | US Army | MC | Marine Corps |
| AFRC | Air Force Reserve Command | N | Navy |
| AF | US Air Force | NAF | Naval Air Facility |
| ANG | Air National Guard | NAS | Naval Air Station |
| AR | US Army Reserve | NASA | National Air and Space Administration |
| ARNG | US Army National Guard | P | US Civil Airport Wherein Permit Covers |
| CG | US Coast Guard | | Use by Transient Military Aircraft |
| CIV/MIL | Joint Use Civil/Military | PVT | Private Use Only (Closed to the Public) |
| DND | Department of National Defense Canada | | |

⑤ AIRPORT LOCATION

Airport location is expressed as distance and direction from the center of the associated city in nautical miles and cardinal points, e.g., 4 NE.

⑥ TIME CONVERSION

Hours of operation of all facilities are expressed in Coordinated Universal Time (UTC) and shown as "Z" time. The directory indicates the number of hours to be subtracted from UTC to obtain local standard time and local daylight saving time UTC-5(-4DT). The symbol ‡ indicates that during periods of Daylight Saving Time effective hours will be one hour earlier than shown. In those areas where daylight saving time is not observed the (-4DT) and ‡ will not be shown. Daylight saving time is in effect from 0200 local time the second Sunday in March to 0200 local time the first Sunday in November. Canada and all U.S. Conterminous States observe daylight saving time except Arizona and Puerto Rico, and the Virgin Islands. If the state observes daylight saving time and the operating times are other than daylight saving times, the operating hours will include the dates, times and no ‡ symbol will be shown, i.e., April 15-Aug 31 0630-1700Z, Sep 1-Apr 14 0600-1700Z.

⑦ GEOGRAPHIC POSITION OF AIRPORT—AIRPORT REFERENCE POINT (ARP)

Positions are shown as hemisphere, degrees, minutes and hundredths of a minute and represent the approximate geometric center of all usable runway surfaces.

⑧ CHARTS

Charts refer to the Sectional Chart and Low and High Altitude Enroute Chart and panel on which the airport or facility is located. Helicopter Chart locations will be indicated as COPTER. IFR Gulf of Mexico West and IFR Gulf of Mexico Central will be depicted as GOMW and GOMC.

⑨ INSTRUMENT APPROACH PROCEDURES, AIRPORT DIAGRAM

IAP indicates an airport for which a prescribed (Public Use) FAA Instrument Approach Procedure has been published. DIAP indicates an airport for which a prescribed DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures. See the Special Notice Section of this directory, Civil Use of Military Fields and the Aeronautical Information Manual 5-4-5 Instrument Approach Procedure Charts for additional information. AD indicates an airport for which an airport diagram has been published. Airport diagrams are located in the back of each A/FD volume alphabetically by associated city and airport name.

⑩ AIRPORT SKETCH

The airport sketch, when provided, depicts the airport and related topographical information as seen from the air and should be used in conjunction with the text. It is intended as a guide for pilots in VFR conditions. Symbology that is not self-explanatory will be reflected in the sketch legend. The airport sketch will be oriented with True North at the top. Airport sketches will be added incrementally.

⑪ ELEVATION

The highest point of an airport's usable runways measured in feet from mean sea level. When elevation is sea level it will be indicated as "00". When elevation is below sea level a minus "-" sign will precede the figure.

⑫ ROTATING LIGHT BEACON

B indicates rotating beacon is available. Rotating beacons operate sunset to sunrise unless otherwise indicated in the AIRPORT REMARKS or MILITARY REMARKS segment of the airport entry.

⑬ SERVICING—CIVIL

| | |
|--|--|
| S1: Minor airframe repairs. | S5: Major airframe repairs. |
| S2: Minor airframe and minor powerplant repairs. | S6: Minor airframe and major powerplant repairs. |
| S3: Major airframe and minor powerplant repairs. | S7: Major powerplant repairs. |
| S4: Major airframe and major powerplant repairs. | S8: Minor powerplant repairs. |

⑭ FUEL

| CODE | FUEL | CODE | FUEL |
|-------|---|----------|---|
| 80 | Grade 80 gasoline (Red) | B+ | Jet B, Wide-cut, turbine fuel with FS-II*, FP** minus 50° C. |
| 100 | Grade 100 gasoline (Green) | J4 (JP4) | (JP-4 military specification) FP** minus 58° C. |
| 100LL | 100LL gasoline (low lead) (Blue) | J5 (JP5) | (JP-5 military specification) Kerosene with FS-11, FP** minus 46° C. |
| 115 | Grade 115 gasoline (115/145 military specification) (Purple) | J8 (JP8) | (JP-8 military specification) Jet A-1, Kerosene with FS-II*, FP** minus 47° C. |
| A | Jet A, Kerosene, without FS-II*, FP** minus 40° C. | J8+100 | (JP-8 military specification) Jet A-1, Kerosene with FS-II*, FP** minus 47° C, with-fuel additive package that improves thermo stability characteristics of JP-8. |
| A+ | Jet A, Kerosene, with FS-II*, FP** minus 40° C. | J | (Jet Fuel Type Unknown) |
| A1 | Jet A-1, Kerosene, without FS-II*, FP** minus 47° C. | MOGAS | Automobile gasoline which is to be used as aircraft fuel. |
| A1+ | Jet A-1, Kerosene with FS-II*, FP** minus 47° C. | | |
| B | Jet B, Wide-cut, turbine fuel without FS-II*, FP** minus 50° C. | | |

*(Fuel System Icing Inhibitor)

** (Freeze Point)

NOTE: Certain automobile gasoline may be used in specific aircraft engines if a FAA supplemental type certificate has been obtained. Automobile gasoline, which is to be used in aircraft engines, will be identified as "MOGAS", however, the grade/type and other octane rating will not be published.

Data shown on fuel availability represents the most recent information the publisher has been able to acquire. Because of a variety of factors, the fuel listed may not always be obtainable by transient civil pilots. Confirmation of availability of fuel should be made directly with fuel suppliers at locations where refueling is planned.

⑮ OXYGEN—CIVIL

| | |
|--------------------|--|
| OX 1 High Pressure | OX 3 High Pressure—Replacement Bottles |
| OX 2 Low Pressure | OX 4 Low Pressure—Replacement Bottles |

⑯ TRAFFIC PATTERN ALTITUDE

Traffic Pattern Altitude (TPA)—The first figure shown is TPA above mean sea level. The second figure in parentheses is TPA above airport elevation. Multiple TPA shall be shown as "TPA—See Remarks" and detailed information shall be shown in the Airport or Military Remarks Section. Traffic pattern data for USAF bases, USN facilities, and U.S. Army airports (including those on which ACC or U.S. Army is a tenant) that deviate from standard pattern altitudes shall be shown in Military Remarks.

⑪ AIRPORT OF ENTRY, LANDING RIGHTS, AND CUSTOMS USER FEE AIRPORTS

U.S. CUSTOMS USER FEE AIRPORT—Private Aircraft operators are frequently required to pay the costs associated with customs processing.

AOE—Airport of Entry. A customs Airport of Entry where permission from U.S. Customs is not required to land. However, at least one hour advance notice of arrival is required.

LRA—Landing Rights Airport. Application for permission to land must be submitted in advance to U.S. Customs. At least one hour advance notice of arrival is required.

NOTE: Advance notice of arrival at both an AOE and LRA airport may be included in the flight plan when filed in Canada or Mexico. Where Flight Notification Service (ADCUS) is available the airport remark will indicate this service. This notice will also be treated as an application for permission to land in the case of an LRA. Although advance notice of arrival may be relayed to Customs through Mexico, Canada, and U.S. Communications facilities by flight plan, the aircraft operator is solely responsible for ensuring that Customs receives the notification. (See Customs, Immigration and Naturalization, Public Health and Agriculture Department requirements in the International Flight Information Manual for further details.)

US Customs Air and Sea Ports, Inspectors and Agents

Northeast Sector (New England and Atlantic States—ME to MD)

407-975-1740

Southeast Sector (Atlantic States—DC, WV, VA to FL)

407-975-1780

Central Sector (Interior of the US, including Gulf states—MS, AL, LA)

407-975-1760

Southwest East Sector (OK and eastern TX)

407-975-1840

Southwest West Sector (Western TX, NM and AZ)

407-975-1820

Pacific Sector (WA, OR, CA, HI and AK)

407-975-1800

⑫ CERTIFICATED AIRPORT (14 CFR PART 139)

Airports serving Department of Transportation certified carriers and certified under 14 CFR part 139 are indicated by the Class and the ARFF Index; e.g. Class I, ARFF Index A, which relates to the availability of crash, fire, rescue equipment. Class I airports can have an ARFF Index A through E, depending on the aircraft length and scheduled departures. Class II, III, and IV will always carry an Index A.

14 CFR PART 139 CERTIFICATED AIRPORTS AIRPORT CLASSIFICATIONS

| Type of Air Carrier Operation | Class I | Class II | Class III | Class IV |
|---|---------|----------|-----------|----------|
| Scheduled Air Carrier Aircraft with 31 or more passenger seats | X | | | |
| Unscheduled Air Carrier Aircraft with 31 or more passengers seats | X | X | | X |
| Scheduled Air Carrier Aircraft with 10 to 30 passenger seats | X | X | X | |

14 CFR—PART 139 CERTIFICATED AIRPORTS

INDICES AND AIRCRAFT RESCUE AND FIRE FIGHTING EQUIPMENT REQUIREMENTS

| <i>Airport Index</i> | <i>Required No. Vehicles</i> | <i>Aircraft Length</i> | <i>Scheduled Departures</i> | <i>Agent + Water for Foam</i> |
|----------------------|------------------------------|---------------------------------------|-----------------------------|---|
| A | 1 | <90' | ≥1 | 500#DC or HALON 1211 or 450#DC + 100 gal H ₂ O |
| B | 1 or 2 | ≥90', <126' ----- ≥126', <159' | ≥5 ----- <5 | Index A + 1500 gal H ₂ O |
| C | 2 or 3 | ≥126', <159' ----- ≥159', <200' | ≥5 ----- <5 | Index A + 3000 gal H ₂ O |
| D | 3 | ≥159', <200' ----- >200' | <5 | Index A + 4000 gal H ₂ O |
| E | 3 | ≥200' | ≥5 | Index A + 6000 gal H ₂ O |

> Greater Than; < Less Than; ≥ Equal or Greater Than; ≤ Equal or Less Than; H₂O—Water; DC—Dry Chemical.

NOTE: The listing of ARFF index does not necessarily assure coverage for non-air carrier operations or at other than prescribed times for air carrier. ARFF Index Ltd.—indicates ARFF coverage may or may not be available, for information contact airport manager prior to flight.

⑬ NOTAM SERVICE

All public use landing areas are provided NOTAM “D” (distant dissemination) and NOTAM “L” (local dissemination) service. Airport NOTAM file identifier is shown for individual airports, e.g. “NOTAM FILE IAD”. See AIM, Basic Flight Information and

ATC Procedures for detailed description of NOTAM's. Current NOTAMs are available from Flight Service Stations at 1-800-WX-BRIEF. Real time Military NOTAMs are available using the DoD Internet NOTAM Distribution System (DINS) www.notams.jcs.mil.

② FAA INSPECTION

All airports not inspected by FAA will be identified by the note: Not insp. This indicates that the airport information has been provided by the owner or operator of the field.

② RUNWAY DATA

Runway information is shown on two lines. That information common to the entire runway is shown on the first line while information concerning the runway ends is shown on the second or following line. Runway direction, surface, length, width, weight bearing capacity, lighting, and slope, when available are shown for each runway. Multiple runways are shown with the longest runway first. Direction, length, width, and lighting are shown for sea-lanes. The full dimensions of helipads are shown, e.g., 50X150. Runway data that requires clarification will be placed in the remarks section.

RUNWAY DESIGNATION

Runways are normally numbered in relation to their magnetic orientation rounded off to the nearest 10 degrees. Parallel runways can be designated L (left)/R (right)/C (center). Runways may be designated as Ultralight or assault strips. Assault strips are shown by magnetic bearing.

RUNWAY DIMENSIONS

Runway length and width are shown in feet. Length shown is runway end to end including displaced thresholds, but excluding those areas designed as overruns.

RUNWAY SURFACE AND LENGTH

Runway lengths prefixed by the letter "H" indicate that the runways are hard surfaced (concrete, asphalt, or part asphalt-concrete). If the runway length is not prefixed, the surface is sod, clay, etc. The runway surface composition is indicated in parentheses after runway length as follows:

| | | |
|-------------------------------------|-----------------------------------|--------------------------------------|
| (AFSC)—Aggregate friction seal coat | (GRVL)—Gravel, or cinders | (PSP)—Pierced steel plank |
| (ASPH)—Asphalt | (MATS)—Pierced steel planking, | (RFSC)—Rubberized friction seal coat |
| (CONC)—Concrete | landing mats, membranes | (TURF)—Turf |
| (DIRT)—Dirt | (PEM)—Part concrete, part asphalt | (TRTD)—Treated |
| (GRVD)—Grooved | (PFC)—Porous friction courses | (WC)—Wire combed |

RUNWAY WEIGHT BEARING CAPACITY

Runway strength data shown in this publication is derived from available information and is a realistic estimate of capability at an average level of activity. It is not intended as a maximum allowable weight or as an operating limitation. Many airport pavements are capable of supporting limited operations with gross weights in excess of the published figures. Permissible operating weights, insofar as runway strengths are concerned, are a matter of agreement between the owner and user. When desiring to operate into any airport at weights in excess of those published in the publication, users should contact the airport management for permission. Runway strength figures are shown in thousand of pounds, with the last three figures being omitted. Add 000 to figure following S, D, 2S, 2T, AUW, SWL, etc., for gross weight capacity. A blank space following the letter designator is used to indicate the runway can sustain aircraft with this type landing gear, although definite runway weight bearing capacity figures are not available, e.g., S, D. Applicable codes for typical gear configurations with S=Single, D=Dual, T=Triple and Q=Quadruple:

| CURRENT | NEW | NEW DESCRIPTION |
|---------|--------|--|
| S | S | Single wheel type landing gear (DC3), (C47), (F15), etc. |
| D | D | Dual wheel type landing gear (BE1900), (B737), (A319), etc. |
| T | D | Dual wheel type landing gear (P3, C9). |
| ST | 2S | Two single wheels in tandem type landing gear (C130). |
| TRT | 2T | Two triple wheels in tandem type landing gear (C17), etc. |
| DT | 2D | Two dual wheels in tandem type landing gear (B707), etc. |
| TT | 2D | Two dual wheels in tandem type landing gear (B757, KC135). |
| SBTT | 2D/D1 | Two dual wheels in tandem/dual wheel body gear type landing gear (KC10). |
| None | 2D/2D1 | Two dual wheels in tandem/two dual wheels in tandem body gear type landing gear (A340-600). |
| DDT | 2D/2D2 | Two dual wheels in tandem/two dual wheels in double tandem body gear type landing gear (B747, E4). |
| TTT | 3D | Three dual wheels in tandem type landing gear (B777), etc. |
| TT | D2 | Dual wheel gear two struts per side main gear type landing gear (B52). |
| TD | C5 | Complex dual wheel and quadruple wheel combination landing gear (C5). |

AUW—All up weight. Maximum weight bearing capacity for any aircraft irrespective of landing gear configuration.

SWL—Single Wheel Loading. (This includes information submitted in terms of Equivalent Single Wheel Loading (ESWL) and Single Isolated Wheel Loading).

PSI—Pounds per square inch. PSI is the actual figure expressing maximum pounds per square inch runway support, e.g., (SWL 000/PSI 535).

Omission of weight bearing capacity indicates information unknown.

The ACN/PCN System is the ICAO standard method of reporting pavement strength for pavements with bearing strengths greater than 12,500 pounds. The Pavement Classification Number (PCN) is established by an engineering assessment of the runway. The PCN is for use in conjunction with an Aircraft Classification Number (ACN). Consult the Aircraft Flight Manual, Flight Information Handbook, or other appropriate source for ACN tables or charts. Currently, ACN data may not be available for all aircraft. If an ACN table or chart is available, the ACN can be calculated by taking into account the aircraft weight, the pavement type, and the subgrade category. For runways that have been evaluated under the ACN/PCN system, the PCN will be shown as a five-part code (e.g. PCN 80 R/B/W/T). Details of the coded format are as follows:

- (1) The PCN NUMBER—The reported PCN indicates that an aircraft with an ACN equal or less than the reported PCN can operate on the pavement subject to any limitation on the tire pressure.
- (2) The type of pavement:
 - R — Rigid
 - F — Flexible
- (3) The pavement subgrade category:
 - A — High
 - B — Medium
 - C — Low
 - D — Ultra-low
- (4) The maximum tire pressure authorized for the pavement:
 - W — High, no limit
 - X — Medium, limited to 217 psi
 - Y — Low, limited to 145 psi
 - Z — Very low, limited to 73 psi
- (5) Pavement evaluation method:
 - T — Technical evaluation
 - U — By experience of aircraft using the pavement

NOTE: Prior permission from the airport controlling authority is required when the ACN of the aircraft exceeds the published PCN or aircraft tire pressure exceeds the published limits.

RUNWAY LIGHTING

Lights are in operation sunset to sunrise. Lighting available by prior arrangement only or operating part of the night and/or pilot controlled lighting with specific operating hours are indicated under airport or military remarks. At USN/USMC facilities lights are available only during airport hours of operation. Since obstructions are usually lighted, obstruction lighting is not included in this code. Unlighted obstructions on or surrounding an airport will be noted in airport or military remarks. Runway lights nonstandard (NSTD) are systems for which the light fixtures are not FAA approved L-800 series: color, intensity, or spacing does not meet FAA standards. Nonstandard runway lights, VASI, or any other system not listed below will be shown in airport remarks or military service. Temporary, emergency or limited runway edge lighting such as flares, smudge pots, lanterns or portable runway lights will also be shown in airport remarks or military service. Types of lighting are shown with the runway or runway end they serve.

NSTD—Light system fails to meet FAA standards.

LIRL—Low Intensity Runway Lights.

MIRL—Medium Intensity Runway Lights.

HIRL—High Intensity Runway Lights.

RAIL—Runway Alignment Indicator Lights.

REIL—Runway End Identifier Lights.

CL—Centerline Lights.

TDZL—Touchdown Zone Lights.

ODALS—Omni Directional Approach Lighting System.

AF OVRN—Air Force Overrun 1000' Standard Approach Lighting System.

LDIN—Lead-In Lighting System.

MALS—Medium Intensity Approach Lighting System.

MALSF—Medium Intensity Approach Lighting System with Sequenced Flashing Lights.

MALSR—Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights.

NOTE: Civil ALSF2 may be operated as SALR during favorable weather conditions. When runway edge lights are positioned more than 10 feet from the edge of the usable runway surface a remark will be added in the "Remarks" portion of the airport entry. This is applicable to Air Force, Air National Guard and Air Force Reserve Bases, and those joint civil/military airfields on which they are tenants.

SALS—Short Approach Lighting System.

SALSF—Short Approach Lighting System with Sequenced Flashing Lights.

SSALS—Simplified Short Approach Lighting System.

SSALF—Simplified Short Approach Lighting System with Sequenced Flashing Lights.

SSALR—Simplified Short Approach Lighting System with Runway Alignment Indicator Lights.

ALSAF—High Intensity Approach Lighting System with Sequenced Flashing Lights.

ALSF1—High Intensity Approach Lighting System with Sequenced Flashing Lights, Category I, Configuration.

ALSF2—High Intensity Approach Lighting System with Sequenced Flashing Lights, Category II, Configuration.

SF—Sequenced Flashing Lights.

OLS—Optical Landing System.

WAVE—OFF.

VISUAL GLIDESLOPE INDICATORS

APAP—A system of panels, which may or may not be lighted, used for alignment of approach path.

| | | | |
|---|--|------|--|
| PNIL | APAP on left side of runway | PNIR | APAP on right side of runway |
| PAPI—Precision Approach Path Indicator | | | |
| P2L | 2-identical light units placed on left side of runway | P4L | 4-identical light units placed on left side of runway |
| P2R | 2-identical light units placed on right side of runway | P4R | 4-identical light units placed on right side of runway |
| PVASI—Pulsating/steady burning visual approach slope indicator, normally a single light unit projecting two colors. | | | |
| PSIL | PVASI on left side of runway | PSIR | PVASI on right side of runway |
| SAVASI—Simplified Abbreviated Visual Approach Slope Indicator | | | |
| S2L | 2-box SAVASI on left side of runway | S2R | 2-box SAVASI on right side of runway |

TRCV—Tri-color visual approach slope indicator, normally a single light unit projecting three colors.

| | | | |
|--------------------------------------|------------------------------------|------|-------------------------------------|
| TRIL | TRCV on left side of runway | TRIR | TRCV on right side of runway |
| VASI—Visual Approach Slope Indicator | | | |
| V2L | 2-box VASI on left side of runway | V6L | 6-box VASI on left side of runway |
| V2R | 2-box VASI on right side of runway | V6R | 6-box VASI on right side of runway |
| V4L | 4-box VASI on left side of runway | V12 | 12-box VASI on both sides of runway |
| V4R | 4-box VASI on right side of runway | V16 | 16-box VASI on both sides of runway |

NOTE: Approach slope angle and threshold crossing height will be shown when available; i.e., –GA 3.5° TCH 37'.

PILOT CONTROL OF AIRPORT LIGHTING

| Key Mike | Function |
|--------------------------|--|
| 7 times within 5 seconds | Highest intensity available |
| 5 times within 5 seconds | Medium or lower intensity (Lower REIL or REIL-Off) |
| 3 times within 5 seconds | Lowest intensity available (Lower REIL or REIL-Off) |

Available systems will be indicated in the airport or military remarks, e.g., ACTIVATE HIRL Rwy 07–25, MALSR Rwy 07, and VASI Rwy 07–122.8.

Where the airport is not served by an instrument approach procedure and/or has an independent type system of different specification installed by the airport sponsor, descriptions of the type lights, method of control, and operating frequency will be explained in clear text. See AIM, “Basic Flight Information and ATC Procedures,” for detailed description of pilot control of airport lighting.

RUNWAY SLOPE

When available, runway slope data will only be provided for those airports with an approved FAA instrument approach procedure. Runway slope will be shown only when it is 0.3 percent or greater. On runways less than 8000 feet, the direction of the slope up will be indicated, e.g., 0.3% up NW. On runways 8000 feet or greater, the slope will be shown (up or down) on the runway end line, e.g., RWY 13: 0.3% up., RWY 21: Pole. Rgt tfc. 0.4% down.

RUNWAY END DATA

Information pertaining to the runway approach end such as approach lights, touchdown zone lights, runway end identification lights, visual glideslope indicators, displaced thresholds, controlling obstruction, and right hand traffic pattern, will be shown on the specific runway end. “Rgt tfc”—Right traffic indicates right turns should be made on landing and takeoff for specified runway end.

LAND AND HOLD SHORT OPERATIONS (LAHSO)

LAHSO is an acronym for “Land and Hold Short Operations.” These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.

Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold–short operations and markings.

RUNWAY DECLARED DISTANCE INFORMATION

TORA—Take-off Run Available. The length of runway declared available and suitable for the ground run of an aeroplane take-off.

TODA—Take-off Distance Available. The length of the take-off run available plus the length of the clearway, if provided.

ASDA—Accelerate-Stop Distance Available. The length of the take-off run available plus the length of the stopway, if provided.

LDA—Landing Distance Available. The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

22 ARRESTING GEAR/SYSTEMS

Arresting gear is shown as it is located on the runway. The a–gear distance from the end of the appropriate runway (or into the overrun) is indicated in parentheses. A–Gear which has a bi–direction capability and can be utilized for emergency approach end engagement is indicated by a (B). The direction of engaging device is indicated by an arrow. Up to 15 minutes advance notice may be required for rigging A–Gear for approach and engagement. Airport listing may show availability of other than US Systems. This information is provided for emergency requirements only. Refer to current aircraft operating manuals for specific engagement weight and speed criteria based on aircraft structural restrictions and arresting system limitations.

Following is a list of current systems referenced in this publication identified by both Air Force and Navy terminology:

BI-DIRECTIONAL CABLE (B)

| <u>TYPE</u> | <u>DESCRIPTION</u> |
|-------------|---|
| BAK-9 | Rotary friction brake. |
| BAK-12A | Standard BAK-12 with 950 foot run out, 1-inch cable and 40,000 pound weight setting. Rotary friction brake. |
| BAK-12B | Extended BAK-12 with 1200 foot run, 1¼ inch Cable and 50,000 pounds weight setting. Rotary friction brake. |
| E28 | Rotary Hydraulic (Water Brake). |
| M21 | Rotary Hydraulic (Water Brake) Mobile. |

The following device is used in conjunction with some aircraft arresting systems:

| | |
|--------|---|
| BAK-14 | A device that raises a hook cable out of a slot in the runway surface and is remotely positioned for engagement by the tower on request. (In addition to personnel reaction time, the system requires up to five seconds to fully raise the cable.) |
| H | A device that raises a hook cable out of a slot in the runway surface and is remotely positioned for engagement by the tower on request. (In addition to personnel reaction time, the system requires up to one and one-half seconds to fully raise the cable.) |

UNI-DIRECTIONAL CABLE

| <u>TYPE</u> | <u>DESCRIPTION</u> |
|--------------|--|
| MB60 | Textile brake—an emergency one-time use, modular braking system employing the tearing of specially woven textile straps to absorb the kinetic energy. |
| E5/E5-1/E5-3 | Chain Type. At USN/USMC stations E-5 A-GEAR systems are rated, e.g., E-5 RATING-13R-1100 HW (DRY), 31L/R-1200 STD (WET). This rating is a function of the A-GEAR chain weight and length and is used to determine the maximum aircraft engaging speed. A dry rating applies to a stabilized surface (dry or wet) while a wet rating takes into account the amount (if any) of wet overrun that is not capable of withstanding the aircraft weight. These ratings are published under Military Service. |

FOREIGN CABLE

| <u>TYPE</u> | <u>DESCRIPTION</u> | <u>US EQUIVALENT</u> |
|-------------|-----------------------------------|----------------------|
| 44B-3H | Rotary Hydraulic (Water Brake) | |
| CHAG | Chain | E-5 |

UNI-DIRECTIONAL BARRIER

| <u>TYPE</u> | <u>DESCRIPTION</u> |
|-------------|---|
| MA-1A | Web barrier between stanchions attached to a chain energy absorber. |
| BAK-15 | Web barrier between stanchions attached to an energy absorber (water squeezer, rotary friction, chain). Designed for wing engagement. |

NOTE: Landing short of the runway threshold on a runway with a BAK-15 in the underrun is a significant hazard. The barrier in the down position still protrudes several inches above the underrun. Aircraft contact with the barrier short of the runway threshold can cause damage to the barrier and substantial damage to the aircraft.

OTHER

| <u>TYPE</u> | <u>DESCRIPTION</u> |
|-------------|---|
| EMAS | Engineered Material Arresting System, located beyond the departure end of the runway, consisting of high energy absorbing materials which will crush under the weight of an aircraft. |

23 MILITARY SERVICE

Specific military services available at the airport are listed under this general heading. Remarks applicable to any military service are shown in the individual service listing.

24 JET AIRCRAFT STARTING UNITS (JASU)

The numeral preceding the type of unit indicates the number of units available. The absence of the numeral indicates ten or more units available. If the number of units is unknown, the number one will be shown. Absence of JASU designation indicates non-availability.

The following is a list of current JASU systems referenced in this publication:

USAF JASU (For variations in technical data, refer to T.O. 35-1-7.)

ELECTRICAL STARTING UNITS:

| | |
|-----------|--|
| A/M32A-86 | AC: 115/200v, 3 phase, 90 kva, 0.8 pf, 4 wire DC: 28v, 1500 amp, 72 kw (with TR pack) |
| MC-1A | AC: 115/208v, 400 cycle, 3 phase, 37.5 kva, 0.8 pf, 108 amp, 4 wire DC: 28v, 500 amp, 14 kw |
| MD-3 | AC: 115/208v, 400 cycle, 3 phase, 60 kva, 0.75 pf, 4 wire DC: 28v, 1500 amp, 45 kw, split bus |
| MD-3A | AC: 115/208v, 400 cycle, 3 phase, 60 kva, 0.75 pf, 4 wire DC: 28v, 1500 amp, 45 kw, split bus |
| MD-3M | AC: 115/208v, 400 cycle, 3 phase, 60 kva, 0.75 pf, 4 wire DC: 28v, 500 amp, 15 kw |

MD-4 AC: 120/208v, 400 cycle, 3 phase, 62.5 kva, 0.8 pf, 175 amp, "WYE" neutral ground, 4 wire, 120v, 400 cycle, 3 phase, 62.5 kva, 0.8 pf, 303 amp, "DELTA" 3 wire, 120v, 400 cycle, 1 phase, 62.5 kva, 0.8 pf, 520 amp, 2 wire

AIR STARTING UNITS

AM32-95 150 +/- 5 lb/min (2055 +/- 68 cfm) at 51 +/- 2 psia
 AM32A-95 150 +/- 5 lb/min @ 49 +/- 2 psia (35 +/- 2 psig)
 LASS 150 +/- 5 lb/min @ 49 +/- 2 psia
 MA-1A 82 lb/min (1123 cfm) at 130° air inlet temp, 45 psia (min) air outlet press
 MC-1 15 cfm, 3500 psia
 MC-1A 15 cfm, 3500 psia
 MC-2A 15 cfm, 200 psia
 MC-11 8,000 cu in cap, 4000 psig, 15 cfm

COMBINED AIR AND ELECTRICAL STARTING UNITS:

AGPU AC: 115/200v, 400 cycle, 3 phase, 30 kw gen
 DC: 28v, 700 amp
 AIR: 60 lb/min @ 40 psig @ sea level
 AM32A-60* AIR: 120 +/- 4 lb/min (1644 +/- 55 cfm) at 49 +/- 2 psia
 AC: 120/208v, 400 cycle, 3 phase, 75 kva, 0.75 pf, 4 wire, 120v, 1 phase, 25 kva
 DC: 28v, 500 amp, 15 kw
 AM32A-60A AIR: 150 +/- 5 lb/min (2055 +/- 68 cfm) at 51 +/- 2 psia
 AC: 120/208v, 400 cycle, 3 phase, 75 kva, 0.75 pf, 4 wire
 DC: 28v, 200 amp, 5.6 kw
 AM32A-60B* AIR: 130 lb/min, 50 psia
 AC: 120/208v, 400 cycle, 3 phase, 75 kva, 0.75 pf, 4 wire
 DC: 28v, 200 amp, 5.6 kw

*NOTE: During combined air and electrical loads, the pneumatic circuitry takes preference and will limit the amount of electrical power available.

USN JASU

ELECTRICAL STARTING UNITS:

NC-8A/A1 DC: 500 amp constant, 750 amp intermittent, 28v;
 AC: 60 kva @ .8 pf, 115/200v, 3 phase, 400 Hz.
 NC-10A/A1/B/C DC: 750 amp constant, 1000 amp intermittent, 28v;
 AC: 90 kva, 115/200v, 3 phase, 400 Hz.

AIR STARTING UNITS:

GTC-85/GTE-85 120 lbs/min @ 45 psi.
 MSU-200NAV/A/U47A-5 204 lbs/min @ 56 psia.
 WELLS AIR START SYSTEM 180 lbs/min @ 75 psi or 120 lbs/min @ 45 psi. Simultaneous multiple start capability.

COMBINED AIR AND ELECTRICAL STARTING UNITS:

NCPP-105/RCPT 180 lbs/min @ 75 psi or 120 lbs/min @ 45 psi. 700 amp, 28v DC. 120/208v, 400 Hz AC, 30 kva.

JASU (ARMY)

59B2-1B 28v, 7.5 kw, 280 amp.

OTHER JASU

ELECTRICAL STARTING UNITS (DND):

CE12 AC 115/200v, 140 kva, 400 Hz, 3 phase
 CE13 AC 115/200v, 60 kva, 400 Hz, 3 phase
 CE14 AC/DC 115/200v, 140 kva, 400 Hz, 3 phase, 28vDC, 1500 amp
 CE15 DC 22-35v, 500 amp continuous 1100 amp intermittent
 CE16 DC 22-35v, 500 amp continuous 1100 amp intermittent soft start

AIR STARTING UNITS (DND):

CA2 ASA 45.5 psig, 116.4 lb/min

COMBINED AIR AND ELECTRICAL STARTING UNITS (DND)

CEA1 AC 120/208v, 60 kva, 400 Hz, 3 phase DC 28v, 75 amp
 AIR 112.5 lb/min, 47 psig

ELECTRICAL STARTING UNITS (OTHER)

C-26 28v 45kw 115-200v 15kw 380-800 Hz 1 phase 2 wire
 C-26-B, C-26-C 28v 45kw: Split Bus: 115-200v 15kw 380-800 Hz 1 phase 2 wire
 E3 DC 28v/10kw

AIR STARTING UNITS (OTHER):

A4 40 psi/2 lb/sec (LPAS Mk12, Mk12L, Mk12A, Mk1, Mk2B)
 MA-1 150 Air HP, 115 lb/min 50 psia
 MA-2 250 Air HP, 150 lb/min 75 psia

CARTRIDGE:

MXU-4A USAF

14 FUEL—MILITARY

Fuel available through US Military Base supply, DESC Into-Plane Contracts and/or reciprocal agreement is listed first and is followed by (Mil). At commercial airports where Into-Plane contracts are in place, the name of the refueling agent is shown. Military fuel should be used first if it is available. When military fuel cannot be obtained but Into-Plane contract fuel is available, Government aircraft must refuel with the contract fuel and applicable refueling agent to avoid any breach in contract terms and conditions. Fuel not available through the above is shown preceded by NC (no contract). When fuel is obtained from NC sources, local purchase procedures must be followed. The US Military Aircraft Identaplates DD Form 1896 (Jet Fuel), DD Form 1897 (Avgas) and AF Form 1245 (Avgas) are used at military installations only. The US Government Aviation Into-Plane Reimbursement (AIR) Card (currently issued by AVCARD) is the instrument to be used to obtain fuel under a DESC Into-Plane Contract and for NC purchases if the refueling agent at the commercial airport accepts the AVCARD. A current list of contract fuel locations is available online at www.desc.dla.mil/Static/ProductsAndServices.asp; click on the Commercial Airports button.

See legend item 14 for fuel code and description.

26 SUPPORTING FLUIDS AND SYSTEMS—MILITARY

CODE

| | |
|---------|---|
| ADI | Anti-Detonation Injection Fluid—Reciprocating Engine Aircraft. |
| W | Water Thrust Augmentation—Jet Aircraft. |
| WAI | Water-Alcohol Injection Type, Thrust Augmentation—Jet Aircraft. |
| SP | Single Point Refueling. |
| PRESAIR | Air Compressors rated 3,000 PSI or more. |
| De-Ice | Anti-icing/De-icing/Defrosting Fluid (MIL-A-8243). |

OXYGEN:

| | |
|------|--|
| LPOX | Low pressure oxygen servicing. |
| HPOX | High pressure oxygen servicing. |
| LHOX | Low and high pressure oxygen servicing. |
| LOX | Liquid oxygen servicing. |
| OXRB | Oxygen replacement bottles. (Maintained primarily at Naval stations for use in acft where oxygen can be replenished only by replacement of cylinders.) |
| OX | Indicates oxygen servicing when type of servicing is unknown. |

NOTE: Combinations of above items is used to indicate complete oxygen servicing available;

| | |
|--------|---|
| LHOXRB | Low and high pressure oxygen servicing and replacement bottles; |
| LPOXRB | Low pressure oxygen replacement bottles only, etc. |

NOTE: Aircraft will be serviced with oxygen procured under military specifications only. Aircraft will not be serviced with medical oxygen.

NITROGEN:

| | |
|-------|---|
| LPNIT | Low pressure nitrogen servicing. |
| HPNIT | High pressure nitrogen servicing. |
| LHNIT | Low and high pressure nitrogen servicing. |

27 OIL—MILITARY

US AVIATION OILS (MIL SPECS):

| CODE | GRADE, TYPE |
|-----------|--|
| O-113 | 1065, Reciprocating Engine Oil (MIL-L-6082) |
| O-117 | 1100, Reciprocating Engine Oil (MIL-L-6082) |
| O-117+ | 1100, O-117 plus cyclohexanone (MIL-L-6082) |
| O-123 | 1065, (Dispersant), Reciprocating Engine Oil (MIL-L-22851 Type III) |
| O-128 | 1100, (Dispersant), Reciprocating Engine Oil (MIL-L-22851 Type II) |
| O-132 | 1005, Jet Engine Oil (MIL-L-6081) |
| O-133 | 1010, Jet Engine Oil (MIL-L-6081) |
| O-147 | None, MIL-L-6085A Lubricating Oil, Instrument, Synthetic |
| O-148 | None, MIL-L-7808 (Synthetic Base) Turbine Engine Oil |
| O-149 | None, Aircraft Turbine Engine Synthetic, 7.5c St |
| O-155 | None, MIL-L-6086C, Aircraft, Medium Grade |
| O-156 | None, MIL-L-23699 (Synthetic Base), Turboprop and Turboshaft Engines |
| JOAP/SOAP | Joint Oil Analysis Program. JOAP support is furnished during normal duty hours, other times on request. (JOAP and SOAP programs provide essentially the same service, JOAP is now the standard joint service supported program.) |

28 TRANSIENT ALERT (TRAN ALERT)—MILITARY

Tran Alert service is considered to include all services required for normal aircraft turn-around, e.g., servicing (fuel, oil, oxygen, etc.), debriefing to determine requirements for maintenance, minor maintenance, inspection and parking assistance of transient aircraft. Drag chute repack, specialized maintenance, or extensive repairs will be provided within the capabilities and priorities of the base. Delays can be anticipated after normal duty hours/holidays/weekends regardless of the hours of transient maintenance operation. Pilots should not expect aircraft to be serviced for TURN-AROUNDS during time periods when servicing or maintenance manpower is not available. In the case of airports not operated exclusively by US military, the servicing indicated by the remarks will not always be available for US military

aircraft. When transient alert services are not shown, facilities are unknown. NO PRIORITY BASIS—means that transient alert services will be provided only after all the requirements for mission/tactical assigned aircraft have been accomplished.

29 AIRPORT REMARKS

The Attendance Schedule is the months, days and hours the airport is actually attended. Airport attendance does not mean watchman duties or telephone accessibility, but rather an attendant or operator on duty to provide at least minimum services (e.g., repairs, fuel, transportation).

Airport Remarks have been grouped in order of applicability. Airport remarks are limited to those items of information that are determined essential for operational use, i.e., conditions of a permanent or indefinite nature and conditions that will remain in effect for more than 30 days concerning aeronautical facilities, services, maintenance available, procedures or hazards, knowledge of which is essential for safe and efficient operation of aircraft. Information concerning permanent closing of a runway or taxiway will not be shown. A note "See Special Notices" shall be applied within this remarks section when a special notice applicable to the entry is contained in the Special Notices section of this publication.

Parachute Jumping indicates parachute jumping areas associated with the airport. See Parachute Jumping Area section of this publication for additional information.

Landing Fee indicates landing charges for private or non-revenue producing aircraft. In addition, fees may be charged for planes that remain over a couple of hours and buy no services, or at major airline terminals for all aircraft.

Note: Unless otherwise stated, remarks including runway ends refer to the runway's approach end.

30 MILITARY REMARKS

Military Remarks published at a joint Civil/Military facility are remarks that are applicable to the Military. At Military Facilities all remarks will be published under the heading Military Remarks. Remarks contained in this section may not be applicable to civil users. The first group of remarks is applicable to the primary operator of the airport. Remarks applicable to a tenant on the airport are shown preceded by the tenant organization, i.e., (A) (AF) (N) (ANG), etc. Military airports operate 24 hours unless otherwise specified. Airport operating hours are listed first (airport operating hours will only be listed if they are different than the airport attended hours or if the attended hours are unavailable) followed by pertinent remarks in order of applicability. Remarks will include information on restrictions, hazards, traffic pattern, noise abatement, customs/agriculture/immigration, and miscellaneous information applicable to the Military.

Type of restrictions:

CLOSED: When designated closed, the airport is restricted from use by all aircraft unless stated otherwise. Any closure applying to specific type of aircraft or operation will be so stated. USN/USMC/USAF airports are considered closed during non-operating hours. Closed airports may be utilized during an emergency provided there is a safe landing area.

OFFICIAL BUSINESS ONLY: The airfield is closed to all transient military aircraft for obtaining routine services such as fueling, passenger drop off or pickup, practice approaches, parking, etc. The airfield may be used by aircrews and aircraft if official government business (including civilian) must be conducted on or near the airfield and prior permission is received from the airfield manager.

AF OFFICIAL BUSINESS ONLY OR NAVY OFFICIAL BUSINESS ONLY: Indicates that the restriction applies only to service indicated.

PRIOR PERMISSION REQUIRED (PPR): Airport is closed to transient aircraft unless approval for operation is obtained from the appropriate commander through Chief, Airfield Management or Airfield Operations Officer. Official Business or PPR does not preclude the use of US Military airports as an alternate for IFR flights. If a non-US military airport is used as a weather alternate and requires a PPR, the PPR must be requested and confirmed before the flight departs. The purpose of PPR is to control volume and flow of traffic rather than to prohibit it. Prior permission is required for all aircraft requiring transient alert service outside the published transient alert duty hours. All aircraft carrying hazardous materials must obtain prior permission as outlined in AFJI 11-204, AR 95-27, OPNAVINST 3710.7.

Note: OFFICIAL BUSINESS ONLY AND PPR restrictions are not applicable to Special Air Mission (SAM) or Special Air Resource (SPAR) aircraft providing person or persons on board are designated Code 6 or higher as explained in AFJMAN 11-213, AR 95-11, OPNAVINST 3722-8J. Official Business Only or PPR do not preclude the use of the airport as an alternate for IFR flights.

31 WEATHER DATA SOURCES

Weather data sources will be listed alphabetically followed by their assigned frequencies and/or telephone number and hours of operation.

ASOS—Automated Surface Observing System. Reports the same as an AWOS-3 plus precipitation identification and intensity, and freezing rain occurrence (future enhancement).

AWOS—Automated Weather Observing System

AWOS-A—reports altimeter setting (all other information is advisory only).

AWOS-1—reports altimeter setting, wind data and usually temperature, dewpoint and density altitude.

AWOS-2—reports the same as AWOS-1 plus visibility.

AWOS-3—reports the same as AWOS-1 plus visibility and cloud/ceiling data.

See AIM, Basic Flight Information and ATC Procedures for detailed description of AWOS.

HIWAS—See RADIO AIDS TO NAVIGATION

LAWSR—Limited Aviation Weather Reporting Station where observers report cloud height, weather, obstructions to vision, temperature and dewpoint (in most cases), surface wind, altimeter and pertinent remarks.

LLWAS—indicates a Low Level Wind Shear Alert System consisting of a center field and several field perimeter anemometers.

SAWSR—identifies airports that have a Supplemental Aviation Weather Reporting Station available to pilots for current weather information.

SWSL—Supplemental Weather Service Location providing current local weather information via radio and telephone.

TDWR—indicates airports that have Terminal Doppler Weather Radar.

WSP—indicates airports that have Weather System Processor.

When the automated weather source is broadcast over an associated airport NAVAID frequency (see NAVAID line), it shall be indicated by a bold ASOS, AWOS, or HIWAS followed by the frequency, identifier and phone number, if available.

32 COMMUNICATIONS

Airport terminal control facilities and radio communications associated with the airport shall be shown. When the call sign is not the same as the airport name the call sign will be shown. Frequencies shall normally be shown in descending order with the primary frequency listed first. Frequencies will be listed, together with sectorization indicated by outbound radials, and hours of operation. Communications will be listed in sequence as follows:

Single Frequency Approach (SFA), Common Traffic Advisory Frequency (CTAF), Automatic Terminal Information Service (ATIS) and Aeronautical Advisory Stations (UNICOM) or (AUNICOM) along with their frequency is shown, where available, on the line following the heading "COMMUNICATIONS." When the CTAF and UNICOM frequencies are the same, the frequency will be shown as CTAF/UNICOM 122.8.

The FSS telephone nationwide is toll free 1-800-WX-BRIEF (1-800-992-7433). When the FSS is located on the field it will be indicated as "on arpt". Frequencies available at the FSS will follow in descending order. Remote Communications Outlet (RCO) providing service to the airport followed by the frequency and FSS RADIO name will be shown when available.

FSS's provide information on airport conditions, radio aids and other facilities, and process flight plans. Airport Advisory Service (AAS) is provided on the CTAF by FSS's for select non-tower airports or airports where the tower is not in operation.

(See AIM, Para 4-1-9 Traffic Advisory Practices at Airports Without Operating Control Towers or AC 90-42C.)

Aviation weather briefing service is provided by FSS specialists. Flight and weather briefing services are also available by calling the telephone numbers listed.

Remote Communications Outlet (RCO)—An unmanned air/ground communications facility that is remotely controlled and provides UHF or VHF communications capability to extend the service range of an FSS.

Civil Communications Frequencies—Civil communications frequencies used in the FSS air/ground system are operated on 122.0, 122.2, 123.6; emergency 121.5; plus receive-only on 122.1.

- a. 122.0 is assigned as the Enroute Flight Advisory Service frequency at selected FSS RADIO outlets.
- b. 122.2 is assigned as a common enroute frequency.
- c. 123.6 is assigned as the airport advisory frequency at select non-tower locations. At airports with a tower, FSS may provide airport advisories on the tower frequency when tower is closed.
- d. 122.1 is the primary receive-only frequency at VOR's.
- e. Some FSS's are assigned 50 kHz frequencies in the 122-126 MHz band (eg. 122.45). Pilots using the FSS A/G system should refer to this directory or appropriate charts to determine frequencies available at the FSS or remotized facility through which they wish to communicate.

Emergency frequency 121.5 and 243.0 are available at all Flight Service Stations, most Towers, Approach Control and RADAR facilities.

Frequencies published followed by the letter "T" or "R", indicate that the facility will only transmit or receive respectively on that frequency. All radio aids to navigation (NAVAID) frequencies are transmit only.

TERMINAL SERVICES

SFA—Single Frequency Approach.

CTAF—A program designed to get all vehicles and aircraft at airports without an operating control tower on a common frequency.

ATIS—A continuous broadcast of recorded non-control information in selected terminal areas.

D-ATIS—Digital ATIS provides ATIS information in text form outside the standard reception range of conventional ATIS via landline & data link communications and voice message within range of existing transmitters.

AUNICOM—Automated UNICOM is a computerized, command response system that provides automated weather, radio check capability and airport advisory information selected from an automated menu by microphone clicks.

UNICOM—A non-government air/ground radio communications facility which may provide airport information.

PTD—Pilot to Dispatcher.

APP CON—Approach Control. The symbol ® indicates radar approach control.

TOWER—Control tower.

GCA—Ground Control Approach System.

GND CON—Ground Control.

GCO—Ground Communication Outlet—An unstaffed, remotely controlled, ground/ground communications facility. Pilots at uncontrolled airports may contact ATC and FSS via VHF to a telephone connection to obtain an instrument clearance or close a VFR or IFR flight plan. They may also get an updated weather briefing prior to takeoff. Pilots will use four "key clicks" on the

VHF radio to contact the appropriate ATC facility or six “key clicks” to contact the FSS. The GCO system is intended to be used only on the ground.

DEP CON—Departure Control. The symbol **(R)** indicates radar departure control.

CLNC DEL—Clearance Delivery.

PRE TAXI CLNC—Pre taxi clearance.

VFR ADVSY SVC—VFR Advisory Service. Service provided by Non-Radar Approach Control.

Advisory Service for VFR aircraft (upon a workload basis) ctc APP CON.

COMD POST—Command Post followed by the operator call sign in parenthesis.

PMSV—Pilot-to-Metro Service call sign, frequency and hours of operation, when full service is other than continuous.

PMSV installations at which weather observation service is available shall be indicated, following the frequency and/or hours of operation as “Wx obsn svc 1900-0000Z+” or “other times” may be used when no specific time is given. PMSV facilities manned by forecasters are considered “Full Service”. PMSV facilities manned by weather observers are listed as “Limited Service”.

OPS—Operations followed by the operator call sign in parenthesis.

CON

RANGE

FLT FLW—Flight Following

MEDIVAC

NOTE: Communication frequencies followed by the letter “X” indicate frequency available on request.

(33) AIRSPACE

Information concerning Class B, C, and part-time D and E surface area airspace shall be published with effective times.

Class D and E surface area airspace that is continuous as established by Rulemaking Docket will not be shown.

CLASS B—Radar Sequencing and Separation Service for all aircraft in CLASS B airspace.

CLASS C—Separation between IFR and VFR aircraft and sequencing of VFR arrivals to the primary airport.

TRSA—Radar Sequencing and Separation Service for participating VFR Aircraft within a Terminal Radar Service Area.

Class C, D, and E airspace described in this publication is that airspace usually consisting of a 5 NM radius core surface area that begins at the surface and extends upward to an altitude above the airport elevation (charted in MSL for Class C and Class D). Class E surface airspace normally extends from the surface up to but not including the overlying controlled airspace.

When part-time Class C or Class D airspace defaults to Class E, the core surface area becomes Class E. This will be formatted as:

AIRSPACE: CLASS C svc “times” ctc **APP CON** other times CLASS E:

or

AIRSPACE: CLASS D svc “times” other times CLASS E.

When a part-time Class C, Class D or Class E surface area defaults to Class G, the core surface area becomes Class G up to, but not including, the overlying controlled airspace. Normally, the overlying controlled airspace is Class E airspace beginning at either 700’ or 1200’ AGL. This will be formatted as:

AIRSPACE: CLASS C svc “times” ctc **APP CON** other times CLASS G, with CLASS E 700’ (or 1200’) AGL & abv:

or

AIRSPACE: CLASS D svc “times” other times CLASS G with CLASS E 700’ (or 1200’) AGL & abv:

or

AIRSPACE: CLASS E svc “times” other times CLASS G with CLASS E 700’ (or 1200’) AGL & abv.

NOTE: AIRSPACE SVC “TIMES” INCLUDE ALL ASSOCIATED ARRIVAL EXTENSIONS. Surface area arrival extensions for instrument approach procedures become part of the primary core surface area. These extensions may be either Class D or Class E airspace and are effective concurrent with the times of the primary core surface area. For example, when a part-time Class C, Class D or Class E surface area defaults to Class G, the associated arrival extensions will default to Class G at the same time. When a part-time Class C or Class D surface area defaults to Class E, the arrival extensions will remain in effect as Class E airspace.

NOTE: CLASS E AIRSPACE EXTENDING UPWARD FROM 700 FEET OR MORE ABOVE THE SURFACE, DESIGNATED IN CONJUNCTION WITH AN AIRPORT WITH AN APPROVED INSTRUMENT PROCEDURE.

Class E 700’ AGL (shown as magenta vignette on sectional charts) and 1200’ AGL (blue vignette) areas are designated when necessary to provide controlled airspace for transitioning to/from the terminal and enroute environments. Unless otherwise specified, these 700’/1200’ AGL Class E airspace areas remain in effect continuously, regardless of airport operating hours or surface area status. These transition areas should not be confused with surface areas or arrival extensions.

(See Chapter 3, AIRSPACE, in the Aeronautical Information Manual for further details)

34 RADIO AIDS TO NAVIGATION

The Airport/Facility Directory lists, by facility name, all Radio Aids to Navigation that appear on National Aeronautical Navigation Services Visual or IFR Aeronautical Charts and those upon which the FAA has approved an Instrument Approach Procedure, with exception of selected TACANs. Military TACAN information will be published for Military facilities contained in this publication. All VOR, VORTAC, TACAN, ILS and MLS equipment in the National Airspace System has an automatic monitoring and shutdown feature in the event of malfunction. Unmonitored, as used in this publication, for any navigational aid, means that monitoring personnel cannot observe the malfunction or shutdown signal. The NAVAID NOTAM file identifier will be shown as "NOTAM FILE IAD" and will be listed on the Radio Aids to Navigation line. When two or more NAVAIDS are listed and the NOTAM file identifier is different from that shown on the Radio Aids to Navigation line, it will be shown with the NAVAID listing. NOTAM file identifiers for ILSs and its components (e.g., NDB (LOM) are the same as the associated airports and are not repeated. Automated Surface Observing System (ASOS), Automated Weather Observing System (AWOS), and Hazardous Inflight Weather Advisory Service (HIWAS) will be shown when this service is broadcast over selected NAVAIDS.

NAVAID information is tabulated as indicated in the following sample:

NAME (L) **ABVORTAC** 117.55 **ABE** Chan 122(Y) N40°43.60' W75°27.30' 180°4.1 NM to fld. 1110/8E. **AWOS. HIWAS.**

↑ ↑ ↑ ↑ ↑ ↑ ↑

Class Frequency Identifier TACAN/DME Channel Geographical Position Site Elevation

Bearing and distance facility to center of airport Magnetic Variation Automated Weather Observing System Hazardous Inflight Weather Advisory Service

VOR unusable 020°-060° byd 26 NM blo 3,500'

Restriction within the normal altitude/range of the navigational aid (See primary alphabetical listing for restrictions on VORTAC and VOR/DME).

Note: Those DME channel numbers with a (Y) suffix require TACAN to be placed in the "Y" mode to receive distance information.

HIWAS—Hazardous Inflight Weather Advisory Service is a continuous broadcast of inflight weather advisories including summarized SIGMETs, convective SIGMETs, AIRMETs and urgent PIREPs. HIWAS is presently broadcast over selected VOR's throughout the U.S.

ASR/PAR—Indicates that Surveillance (ASR) or Precision (PAR) radar instrument approach minimums are published in the U.S. Terminal Procedures. Only part-time hours of operation will be shown.

RADIO CLASS DESIGNATIONS

VOR/DME/TACAN Standard Service Volume (SSV) Classifications

| SSV Class | Altitudes | Distance (NM) |
|-------------------|--------------------|---------------|
| (T) Terminal | 1000' to 12,000' | 25 |
| (L) Low Altitude | 1000' to 18,000' | 40 |
| (H) High Altitude | 1000' to 14,500' | 40 |
| | 14,500' to 18,000' | 100 |
| | 18,000' to 45,000' | 130 |
| | 45,000' to 60,000' | 100 |

NOTE: Additionally, (H) facilities provide (L) and (T) service volume and (L) facilities provide (T) service. Altitudes are with respect to the station's site elevation. Coverage is not available in a cone of airspace directly above the facility.

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The term VOR is, operationally, a general term covering the VHF omnidirectional bearing type of facility without regard to the fact that the power, the frequency protected service volume, the equipment configuration, and operational requirements may vary between facilities at different locations.

| | |
|---------------|--|
| AB _____ | Automatic Weather Broadcast. |
| DF _____ | Direction Finding Service. |
| DME _____ | UHF standard (TACAN compatible) distance measuring equipment. |
| DME(Y) _____ | UHF standard (TACAN compatible) distance measuring equipment that require TACAN to be placed in the "Y" mode to receive DME. |
| GS _____ | Glide slope. |
| H _____ | Non-directional radio beacon (homing), power 50 watts to less than 2,000 watts (50 NM at all altitudes). |
| HH _____ | Non-directional radio beacon (homing), power 2,000 watts or more (75 NM at all altitudes). |
| H-SAB _____ | Non-directional radio beacons providing automatic transcribed weather service. |
| ILS _____ | Instrument Landing System (voice, where available, on localizer channel). |
| IM _____ | Inner marker. |
| ISMLS _____ | Interim Standard Microwave Landing System. |
| LDA _____ | Localizer Directional Aid. |
| LMM _____ | Compass locator station when installed at middle marker site (15 NM at all altitudes). |
| LOM _____ | Compass locator station when installed at outer marker site (15 NM at all altitudes). |
| MH _____ | Non-directional radio beacon (homing) power less than 50 watts (25 NM at all altitudes). |
| MLS _____ | Microwave Landing System. |
| MM _____ | Middle marker. |
| OM _____ | Outer marker. |
| S _____ | Simultaneous range homing signal and/or voice. |
| SABH _____ | Non-directional radio beacon not authorized for IFR or ATC. Provides automatic weather broadcasts. |
| SDF _____ | Simplified Direction Facility. |
| TACAN _____ | UHF navigational facility-omnidirectional course and distance information. |
| VOR _____ | VHF navigational facility-omnidirectional course only. |
| VOR/DME _____ | Collocated VOR navigational facility and UHF standard distance measuring equipment. |
| VORTAC _____ | Collocated VOR and TACAN navigational facilities. |
| W _____ | Without voice on radio facility frequency. |
| Z _____ | VHF station location marker at a LF radio facility. |

ILS FACILITY PERFORMANCE CLASSIFICATION CODES

Codes define the ability of an ILS to support autoland operations. The two portions of the code represent Official Category and farthest point along a Category I, II, or III approach that the Localizer meets Category III structure tolerances.

Official Category: I, II, or III; the lowest minima on published or unpublished procedures supported by the ILS.

Farthest point of satisfactory Category III Localizer performance for Category I, II, or III approaches: A – 4 NM prior to runway threshold, B – 3500 ft prior to runway threshold, C – glide angle dependent but generally 750–1000 ft prior to threshold, T – runway threshold, D – 3000 ft after runway threshold, and E – 2000 ft prior to stop end of runway.

ILS information is tabulated as indicated in the following sample:

ILS/DME 108.5 I-ORL Chan 22 Rwy 18. Class IIE. LOM HERNY NDB.

ILS Facility Performance
Classification Code

FREQUENCY PAIRING PLAN AND MLS CHANNELING

| MLS CHANNEL | VHF FREQUENCY | TACAN CHANNEL | MLS CHANNEL | VHF FREQUENCY | TACAN CHANNEL | MLS CHANNEL | VHF FREQUENCY | TACAN CHANNEL |
|----------------|------------------|------------------|----------------|------------------|------------------|----------------|------------------|------------------|
| 500 | 108.10 | 18X | 568 | 109.45 | 31Y | 636 | 114.15 | 88Y |
| 502 | 108.30 | 20X | 570 | 109.55 | 32Y | 638 | 114.25 | 89Y |
| 504 | 108.50 | 22X | 572 | 109.65 | 33Y | 640 | 114.35 | 90Y |
| 506 | 108.70 | 24X | 574 | 109.75 | 34Y | 642 | 114.45 | 91Y |
| 508 | 108.90 | 26X | 576 | 109.85 | 35Y | 644 | 114.55 | 92Y |
| 510 | 109.10 | 28X | 578 | 109.95 | 36Y | 646 | 114.65 | 93Y |
| 512 | 109.30 | 30X | 580 | 110.05 | 37Y | 648 | 114.75 | 94Y |
| 514 | 109.50 | 32X | 582 | 110.15 | 38Y | 650 | 114.85 | 95Y |
| 516 | 109.70 | 34X | 584 | 110.25 | 39Y | 652 | 114.95 | 96Y |
| 518 | 109.90 | 36X | 586 | 110.35 | 40Y | 654 | 115.05 | 97Y |
| 520 | 110.10 | 38X | 588 | 110.45 | 41Y | 656 | 115.15 | 98Y |
| 522 | 110.30 | 40X | 590 | 110.55 | 42Y | 658 | 115.25 | 99Y |
| 524 | 110.50 | 42X | 592 | 110.65 | 43Y | 660 | 115.35 | 100Y |
| 526 | 110.70 | 44X | 594 | 110.75 | 44Y | 662 | 115.45 | 101Y |
| 528 | 110.90 | 46X | 596 | 110.85 | 45Y | 664 | 115.55 | 102Y |
| 530 | 111.10 | 48X | 598 | 110.95 | 46Y | 666 | 115.65 | 103Y |
| 532 | 111.30 | 50X | 600 | 111.05 | 47Y | 668 | 115.75 | 104Y |
| 534 | 111.50 | 52X | 602 | 111.15 | 48Y | 670 | 115.85 | 105Y |
| 536 | 111.70 | 54X | 604 | 111.25 | 49Y | 672 | 115.95 | 106Y |
| 538 | 111.90 | 56X | 606 | 111.35 | 50Y | 674 | 116.05 | 107Y |
| 540 | 108.05 | 17Y | 608 | 111.45 | 51Y | 676 | 116.15 | 108Y |
| 542 | 108.15 | 18Y | 610 | 111.55 | 52Y | 678 | 116.25 | 109Y |
| 544 | 108.25 | 19Y | 612 | 111.65 | 53Y | 680 | 116.35 | 110Y |
| 546 | 108.35 | 20Y | 614 | 111.75 | 54Y | 682 | 116.45 | 111Y |
| 548 | 108.45 | 21Y | 616 | 111.85 | 55Y | 684 | 116.55 | 112Y |
| 550 | 108.55 | 22Y | 618 | 111.95 | 56Y | 686 | 116.65 | 113Y |
| 552 | 108.65 | 23Y | 620 | 113.35 | 80Y | 688 | 116.75 | 114Y |
| 554 | 108.75 | 24Y | 622 | 113.45 | 81Y | 690 | 116.85 | 115Y |
| 556 | 108.85 | 25Y | 624 | 113.55 | 82Y | 692 | 116.95 | 116Y |
| 558 | 108.95 | 26Y | 626 | 113.65 | 83Y | 694 | 117.05 | 117Y |
| 560 | 109.05 | 27Y | 628 | 113.75 | 84Y | 696 | 117.15 | 118Y |
| 562 | 109.15 | 28Y | 630 | 113.85 | 85Y | 698 | 117.25 | 119Y |
| 564 | 109.25 | 29Y | 632 | 113.95 | 86Y | | | |
| 566 | 109.35 | 30Y | 634 | 114.05 | 87Y | | | |

FREQUENCY PAIRING PLAN AND MLS CHANNELING

The following is a list of paired VOR/ILS VHF frequencies with TACAN channels and MLS channels.

| TACAN CHANNEL | VHF FREQUENCY | MLS CHANNEL | TACAN CHANNEL | VHF FREQUENCY | MLS CHANNEL | TACAN CHANNEL | VHF FREQUENCY | MLS CHANNEL |
|------------------|------------------|----------------|------------------|------------------|----------------|------------------|------------------|----------------|
| 2X | 134.5 | - | 19Y | 108.25 | 544 | 25X | 108.80 | - |
| 2Y | 134.55 | - | 20X | 108.30 | 502 | 25Y | 108.85 | 556 |
| 11X | 135.4 | - | 20Y | 108.35 | 546 | 26X | 108.90 | 508 |
| 11Y | 135.45 | - | 21X | 108.40 | - | 26Y | 108.95 | 558 |
| 12X | 135.5 | - | 21Y | 108.45 | 548 | 27X | 109.00 | - |
| 12Y | 135.55 | - | 22X | 108.50 | 504 | 27Y | 109.05 | 560 |
| 17X | 108.00 | - | 22Y | 108.55 | 550 | 28X | 109.10 | 510 |
| 17Y | 108.05 | 540 | 23X | 108.60 | - | 28Y | 109.15 | 562 |
| 18X | 108.10 | 500 | 23Y | 108.65 | 552 | 29X | 109.20 | - |
| 18Y | 108.15 | 542 | 24X | 108.70 | 506 | 29Y | 109.25 | 564 |
| 19X | 108.20 | - | 24Y | 108.75 | 554 | 30X | 109.30 | 512 |

| 2 | | | | | | | | |
|---------------|---------------|-------------|---------------|---------------|-------------|---------------|---------------|-------------|
| 2 | | | | | | | | |
| TACAN CHANNEL | VHF FREQUENCY | MLS CHANNEL | TACAN CHANNEL | VHF FREQUENCY | MLS CHANNEL | TACAN CHANNEL | VHF FREQUENCY | MLS CHANNEL |
| 30Y | 109.35 | 566 | 63X | 133.60 | - | 95Y | 114.85 | 650 |
| 31X | 109.40 | - | 63Y | 133.65 | - | 96X | 114.90 | - |
| 31Y | 109.45 | 568 | 64X | 133.70 | - | 96Y | 114.95 | 652 |
| 32X | 109.50 | 514 | 64Y | 133.75 | - | 97X | 115.00 | - |
| 32Y | 109.55 | 570 | 65X | 133.80 | - | 97Y | 115.05 | 654 |
| 33X | 109.60 | - | 65Y | 133.85 | - | 98X | 115.10 | - |
| 33Y | 109.65 | 572 | 66X | 133.90 | - | 98Y | 115.15 | 656 |
| 34X | 109.70 | 516 | 66Y | 133.95 | - | 99X | 115.20 | - |
| 34Y | 109.75 | 574 | 67X | 134.00 | - | 99Y | 115.25 | 658 |
| 35X | 109.80 | - | 67Y | 134.05 | - | 100X | 115.30 | - |
| 35Y | 109.85 | 576 | 68X | 134.10 | - | 100Y | 115.35 | 660 |
| 36X | 109.90 | 518 | 68Y | 134.15 | - | 101X | 115.40 | - |
| 36Y | 109.95 | 578 | 69X | 134.20 | - | 101Y | 115.45 | 662 |
| 37X | 110.00 | - | 69Y | 134.25 | - | 102X | 115.50 | - |
| 37Y | 110.05 | 580 | 70X | 112.30 | - | 102Y | 115.55 | 664 |
| 38X | 110.10 | 520 | 70Y | 112.35 | - | 103X | 115.60 | - |
| 38Y | 110.15 | 582 | 71X | 112.40 | - | 103Y | 115.65 | 666 |
| 39X | 110.20 | - | 71Y | 112.45 | - | 104X | 115.70 | - |
| 39Y | 110.25 | 584 | 72X | 112.50 | - | 104Y | 115.75 | 668 |
| 40X | 110.30 | 522 | 72Y | 112.55 | - | 105X | 115.80 | - |
| 40Y | 110.35 | 586 | 73X | 112.60 | - | 105Y | 115.85 | 670 |
| 41X | 110.40 | - | 73Y | 112.65 | - | 106X | 115.90 | - |
| 41Y | 110.45 | 588 | 74X | 112.70 | - | 106Y | 115.95 | 672 |
| 42X | 110.50 | 524 | 74Y | 112.75 | - | 107X | 116.00 | - |
| 42Y | 110.55 | 590 | 75X | 112.80 | - | 107Y | 116.05 | 674 |
| 43X | 110.60 | - | 75Y | 112.85 | - | 108X | 116.10 | - |
| 43Y | 110.65 | 592 | 76X | 112.90 | - | 108Y | 116.15 | 676 |
| 44X | 110.70 | 526 | 76Y | 112.95 | - | 109X | 116.20 | - |
| 44Y | 110.75 | 594 | 77X | 113.00 | - | 109Y | 116.25 | 678 |
| 45X | 110.80 | - | 77Y | 113.05 | - | 110X | 116.30 | - |
| 45Y | 110.85 | 596 | 78X | 113.10 | - | 110Y | 116.35 | 680 |
| 46X | 110.90 | 528 | 78Y | 113.15 | - | 111X | 116.40 | - |
| 46Y | 110.95 | 598 | 79X | 113.20 | - | 111Y | 116.45 | 682 |
| 47X | 111.00 | - | 79Y | 113.25 | - | 112X | 116.50 | - |
| 47Y | 111.05 | 600 | 80X | 113.30 | - | 112Y | 116.55 | 684 |
| 48X | 111.10 | 530 | 80Y | 113.35 | 620 | 113X | 116.60 | - |
| 48Y | 111.15 | 602 | 81X | 113.40 | - | 113Y | 116.65 | 686 |
| 49X | 111.20 | - | 81Y | 113.45 | 622 | 114X | 116.70 | - |
| 49Y | 111.25 | 604 | 82X | 113.50 | - | 114Y | 116.75 | 688 |
| 50X | 111.30 | 532 | 82Y | 113.55 | 624 | 115X | 116.80 | - |
| 50Y | 111.35 | 606 | 83X | 113.60 | - | 115Y | 116.85 | 690 |
| 51X | 111.40 | - | 83Y | 113.65 | 626 | 116X | 116.90 | - |
| 51Y | 111.45 | 608 | 84X | 113.70 | - | 116Y | 116.95 | 692 |
| 52X | 111.50 | 534 | 84Y | 113.75 | 628 | 117X | 117.00 | - |
| 52Y | 111.55 | 610 | 85X | 113.80 | - | 117Y | 117.05 | 694 |
| 53X | 111.60 | - | 85Y | 113.85 | 630 | 118X | 117.10 | - |
| 53Y | 111.65 | 612 | 86X | 113.90 | - | 118Y | 117.15 | 696 |
| 54X | 111.70 | 536 | 86Y | 113.95 | 632 | 119X | 117.20 | - |
| 54Y | 111.75 | 614 | 87X | 114.00 | - | 119Y | 117.25 | 698 |
| 55X | 111.80 | - | 87Y | 114.05 | 634 | 120X | 117.30 | - |
| 55Y | 111.85 | 616 | 88X | 114.10 | - | 120Y | 117.35 | - |
| 56X | 111.90 | 538 | 88Y | 114.15 | 636 | 121X | 117.40 | - |
| 56Y | 111.95 | 618 | 89X | 114.20 | - | 121Y | 117.45 | - |
| 57X | 112.00 | - | 89Y | 114.25 | 638 | 122X | 117.50 | - |
| 57Y | 112.05 | - | 90X | 114.30 | - | 122Y | 117.55 | - |
| 58X | 112.10 | - | 90Y | 114.35 | 640 | 123X | 117.60 | - |
| 58Y | 112.15 | - | 91X | 114.40 | - | 123Y | 117.65 | - |
| 59X | 112.20 | - | 91Y | 114.45 | 642 | 124X | 117.70 | - |
| 59Y | 112.25 | - | 92X | 114.50 | - | 124Y | 117.75 | - |
| 60X | 133.30 | - | 92Y | 114.55 | 644 | 125X | 117.80 | - |
| 60Y | 133.35 | - | 93X | 114.60 | - | 125Y | 117.85 | - |
| 61X | 133.40 | - | 93Y | 114.65 | 646 | 126X | 117.90 | - |
| 61Y | 133.45 | - | 94X | 114.70 | - | 126Y | 117.95 | - |
| 62X | 133.50 | - | 94Y | 114.75 | 648 | | | |
| 62Y | 133.55 | - | 95X | 114.80 | - | | | |

(35) COMM/NAV/WEATHER REMARKS:
 These remarks consist of pertinent information affecting the current status of communications, NAVAIDs and weather.

ABERDEEN RGNL (ABR) 2 E UTC-6(-5DT) N45°26.94' W98°25.31'**TWIN CITIES**1302 B S4 **FUEL** 100LL, JET A, MOGAS OX 1 Class I, ARFF Index A NOTAM FILE ABR**H-21, L-14G****RWY 13-31:** H6901X100 (CONC-GRVD) S-99, D-150, 2S-175, 2D-250 HIRL**IAP****RWY 13:** REIL: VASI(V4L)—GA 3.0° TCH 52'.**RWY 31:** MALSR: PAPI(P4L)—GA 3.0° TCH 68'.**RWY 17-35:** H5500X100 (ASPH-PFC) S-60, D-75, 2S-95, 2D-140 MIRL**RWY 17:** REIL: PAPI(P4R)—GA 3.0° TCH 37'.**RWY 35:** REIL: PAPI(P4L)—GA 3.0° TCH 38'.**RUNWAY DECLARED DISTANCE INFORMATION****RWY 13:** TORA-6901 TODA-6901 ASDA-6901 LDA-6901**RWY 17:** TORA-5500 TODA-5500 ASDA-5500 LDA-5500**RWY 31:** TORA-6901 TODA-6901 ASDA-6901 LDA-6901**RWY 35:** TORA-5500 TODA-5500 ASDA-5500 LDA-5500

AIRPORT REMARKS: Attended 0930-0500Z. Rwy 13 and Rwy 17 apch ends are closely aligned. Verify correct rwy and compass heading prior to dep. PPR for unscheduled air carrier ops with more than 30 passenger seats call arpt manager 605-626-7020. After hours call 605-626-7068. Gulls and Geese on and invof arpt Mar-Dec. MIRL Rwy 17-35 and HIRL Rwy 13-31 preset on low ints SS-0600Z, to increase ints and ACTIVATE REIL Rwy 13, Rwy 17, Rwy 35 and MALSR Rwy 31—CTAF.

WEATHER DATA SOURCES: ASOS 125.875 (605) 229-4512.**COMMUNICATIONS:** CTAF 122.7 UNICOM 122.95

RCO 122.4 122.1R 113.0T (HURON RADIO)

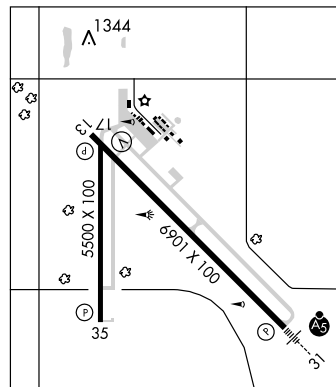
MINNEAPOLIS CENTER APP/DEP CON 120.6

RADIO AIDS TO NAVIGATION: NOTAM FILE ABR.

(H) VOR/DME 113.0 ABR Chan 77 N45°25.04' W98°22.12' 303° 2.9 NM to fld. 1301/7E.

RENEY NDB (LOM) 203 AB N45°23.16' W98°19.70' 307° 5.4 NM to fld.

ILS/DME 109.9 I-ABR Chan 36 Rwy 31 Class IE. LOM RENEE NDB, BC unusable beyond 10 NM below 3500'; Unusable beyond 15 NM.

**ARLINGTON MUNI** (3A9) 2 N UTC-6(-5DT) N44°23.66' W97°07.39'**OMAHA**

1818 B TPA-2618(800) NOTAM FILE HON

RWY 14-32: 3000X250 (TURF) LIRL**RWY 14:** Trees. **RWY 32:** Trees.**RWY 04-22:** 2400X250 (TURF)**RWY 04:** Trees. **RWY 22:** Trees.

AIRPORT REMARKS: Unattended. Arpt CLSD Nov 1-Apr 1. Waterfowl on and invof arpt. Rwy 04-22 and Rwy 14-32 marked with yellow metal A-frame markers.

COMMUNICATIONS: CTAF 122.9**BEADY** N44°26.63' W98°20.21' NOTAM FILE HON.**NDB (LOM)** 302 HO 120° 5.8 NM to Huron Rgnl.

BELLE FOURCHE MUNI (EFC) 4 N UTC-7(-6DT) N44°44.08' W103°51.71'

3191 B S4 FUEL 100LL, NOTAM FILE EFC

RWY 14-32: H4501X60 (ASPH) S-12.5 MIRL

RWY 14: PAPI(P4L)—GA 3.0° TCH 41'.

RWY 32: PAPI(P4L)—GA 3.0° TCH 32'.

RWY 18-36: 3655X120 (TURF)

AIRPORT REMARKS: Attended 1500-0100Z±. Ultralights and glider ops on and in/ovf arpt. Waterfowl on and in/ovf arpt. Rwy 18 marked with white and black metal A-frames. Rwy 36 marked with white and black metal A-frames. ACTIVATE MIRL Rwy 14-32—CTAF.

WEATHER DATA SOURCES: AWOS-A 122.8 (617) 262-3825.

COMMUNICATIONS: CTAF/UNICOM 122.8

DENVER CENTER APP/DEP CON 127.95

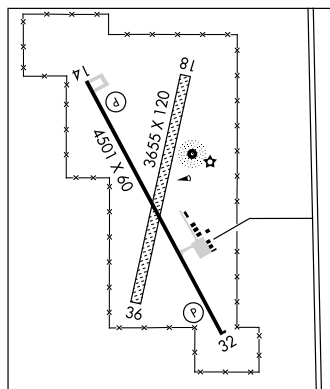
RADIO AIDS TO NAVIGATION: NOTAM FILE RAP.

RAPID CITY (H) VORTAC 112.3 RAP Chan 70 N43°58.56'

W103°00.74' 309° 58.4 NM to fld. 3160/13E.

NDB (MHW) 269 EFC N44°44.16' W103°51.54' at fld.

NOTAM FILE EFC. NDB OTS indef.



BILLINGS

L-12F, 13E

IAP

BISON MUNI (6V5) 0 SW UTC-7(-6DT) N45°31.12' W102°28.03'

2785 B FUEL 100LL NOTAM FILE HON

RWY 11-29: H3500X60 (ASPH) S-12.5 MIRL

RWY 29: Trees.

AIRPORT REMARKS: Unattended. For fuel call

605-244-5677/7143/5423. Wildlife on and in/ovf arpt. ACTIVATE

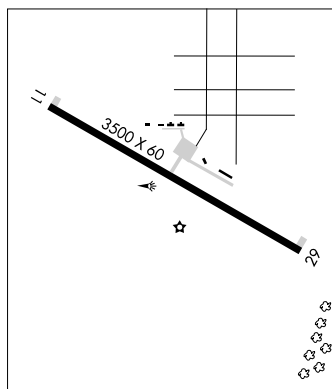
MIRL Rwy 11-29—CTAF.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE DIK.

DICKINSON (H) VORTACW 112.9 DIK Chan 76 N46°51.60'

W102°46.41' 157° 81.5 NM to fld. 2520/14E. HIWAS.



BLACK HILLS—CLYDE ICE FLD (See SPEARFISH)

BOB WILEY FLD (See WINNER)

BOWDLE MUNI (5P3) 1 SW UTC-6(-5DT) N45°26.37' W99°40.51'

1967 B NOTAM FILE HON

RWY 13-31: 3600X150 (TURF) LIRL

RWY 31: Road.

AIRPORT REMARKS: Unattended. Arpt CLOSED SS-SR. Arpt CLOSED Nov 1-Apr 15. For field conditions call arpt manager 605-285-6158/6350. Wildlife on and in/ovf arpt. Rwy 13-31 marked with yellow and black metal A-frame markers. Rwy 13-31 Daylight use only, LIRL OTS indef. Rotating beacon OTS indef. ACTIVATE LIRL Rwy 13-31—CTAF.

COMMUNICATIONS: CTAF 122.9

TWIN CITIES

BRITTON MUNI (BTN) 2 NE UTC-6(-5DT) N45°48.90' W97°44.57'

TWIN CITIES

1318 B S2 FUEL 100LL NOTAM FILE HON

L-14G

RWY 13-31: H4210X75 (ASPH) S-12.5 MIRL

IAP

RWY 13: PAPI(P4L)—GA 3.0° TCH 37'. Road.

RWY 31: PAPI(P4L)—GA 3.2° TCH 37'.

RWY 01-19: 2034X120 (TURF)

RWY 01: Fence. RWY 19: Road.

AIRPORT REMARKS: Attended dalgt hrs. Waterfowl and gulls on and invof arpt. Rwy 01-19 marked with black and white cones.

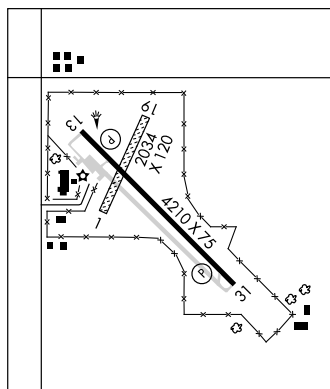
COMMUNICATIONS: CTAF/UNICOM 122.8

MINNEAPOLIS CENTER APP/DEP CON 120.6

RADIO AIDS TO NAVIGATION: NOTAM FILE ABR.

ABERDEEN (H) VOR/DME 113.0 ABR Chan 77 N45°25.04'

W98°22.12' 041° 35.6 NM to fld. 1301/7E.



BROOKINGS RGNL (BKX) 0 SW UTC-6(-5DT) N44°18.29' W96°49.02'

OMAHA

1648 B S4 FUEL 100LL, JET A Class IV, ARFF Index A NOTAM FILE BKX

H-21, L-121

RWY 12-30: H5231X100 (ASPH-PFC) S-39, D-54, 2S-83, 2D-76 HIRL 0.4% up SE

IAP

RWY 12: REIL. PAPI(P4L)—GA 3.0° TCH 49'. Railroad.

RWY 30: MALSR. REIL. PAPI(P4L)—GA 3.0° TCH 45'. Tree.

RWY 17-35: H3599X60 (ASPH) S-12.5 MIRL 1.1% up S

RWY 17: REIL. PAPI(P4L)—GA 3.0° TCH 27'. Railroad.

RWY 35: REIL. PAPI(P4L)—GA 3.0° TCH 24'. Road.

RUNWAY DECLARED DISTANCE INFORMATION

RWY 12: TORA-5231 TODA-5231 ASDA-5231 LDA-5231

RWY 17: TORA-3599 TODA-3599 ASDA-3599 LDA-3599

RWY 30: TORA-5231 TODA-5231 ASDA-5231 LDA-5231

RWY 35: TORA-3599 TODA-3599 ASDA-3599 LDA-3599

AIRPORT REMARKS: Attended 1400-0000Z. For attendant after hrs call

605-691-7149 or 605-690-6013. Rwy 12 and Rwy 17 apch

ends are closely aligned. Verify correct rwy and compass heading

prior to dep. Deer on and invof arpt. PPR 48 hrs for unscheduled

air carrier ops with 31 plus passenger seats call arpt manager

(605) 697-8664. Rwy 17-35 not avbl scheduled ops involving air

carrier acft designed for 10-30 passenger seats and unscheduled

air carrier ops involving acft designed 30 plus passenger seats.

Scheduled air carrier ops involving acft designed for 10-30

passenger seats and unscheduled air carrier ops involving acft designed for 31 plus passenger seats are not

authorized under part 139 to operate at BKX in excess of 15 mins before or after scheduled arrival/departure

times. Coordinate scheduled changes with airport manager to assure ARFF avbl call (605) 697-8664. Intensive

student training. Wildlife on and invof arpt. Large flocks of geese and gulls on and invof arpt Apr-Oct. During

summer months mowing and farming ops dalgt hrs only. ACTIVATE HIRL Rwy 12-30, MIRL Rwy 17-35, MALSR

Rwy 30, REIL Rwy 12, Rwy 17 and Rwy 35, PAPI Rwy 12, Rwy 30, Rwy 17 and Rwy 35—CTAF.

WEATHER DATA SOURCES: AWOS-3 108.8 BKX (605) 692-1809.

COMMUNICATIONS: CTAF/UNICOM 123.0

RCO 122.65 (HURON RADIO)

AIRSPACE: CLASS E svc Mon-Fri 1130-0130Z, Sat 1100-1300Z and 1900-2100Z, Sun 2100-0130Z other times CLASS G.

RADIO AIDS TO NAVIGATION: NOTAM FILE BKX.

(T) VORW/DME 108.8 BKX Chan 25 N44°18.20' W96°48.91' at fld. 1641/6E. AWOS-3.

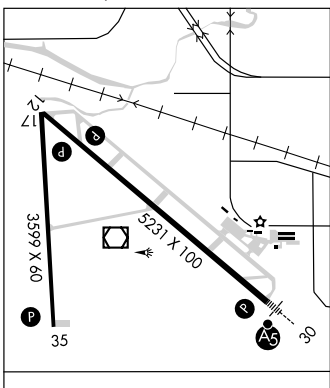
VOR portion unusable:

116°-129° byd 10 NM blo 6,000'

270°-029° byd 10 NM blo 6,000'

130°-180° blo 6,000'

ILS 110.9 I-BKX Rwy 30. Class IE. Unmonitored.



BUFFALO N45°33.13' W103°27.38' NOTAM FILE HON.**BILLINGS**

(T) VOR/DME 109.4 BUA Chan 31 286° 3.5 NM to Harding Co. VFR only.

L-13E

DME unusable

200°-230° byd 25 NM blo 6000'

070°-130° byd 25 NM blo 6000'.

RCO 122.15 (HURON RADIO)

BUFFALO**HARDING CO** (9D2) 1 SE UTC-7(-6DT) N45°34.83' W103°31.78'**BILLINGS**

2889 B FUEL 100LL NOTAM FILE HON

L-13E

RWY 12-30: H3900X60 (ASPH) S-12.5 LIRL

RWY 12: Fence.

RWY 08-26: 2250X100 (TURF)

RWY 08: Road. RWY 26: Fence.

AIRPORT REMARKS: Unattended. For fuel call 605-375-3254/3255. Wildlife on and invof arpt. Rwy 12-30 rough.**COMMUNICATIONS:** CTAF 122.9**RADIO AIDS TO NAVIGATION:** NOTAM FILE HON.**BUFFALO (T) VOR/DME** 109.4 BUA Chan 31 N45°33.13' W103°27.38' 286° 3.5 NM to fld. 3020/13E. VFR only.**CAGUR** N42°50.62' W97°18.13' NOTAM FILE YKN.**OMAHA**

NDB (LOM) 347 YK 313° 5.7 NM to Chan Gurney Muni. Unmonitored.

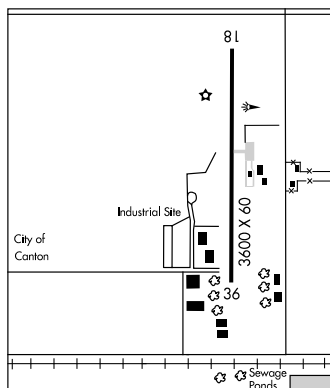
CANTON MUNI (7G9) 1 NE UTC-6(-5DT) N43°18.53' W96°34.26'**OMAHA**

1290 B S1 FUEL 100LL NOTAM FILE HON

L-12I

RWY 18-36: H3600X60 (ASPH) S-12.5 LIRL

RWY 18: Road. RWY 36: Trees.

AIRPORT REMARKS: Attended Mon-Fri 1500-2300Z⁺. Deer and wildlife on and invof arpt.**COMMUNICATIONS:** CTAF/UNICOM 122.8**RADIO AIDS TO NAVIGATION:** NOTAM FILE FSD.**SIOUX FALLS (H) VORTACW** 115.0 FSD Chan 97 N43°38.97' W96°46.87' 147° 22.4 NM to fld. 1570/9E. HIWAS.

CHAMBERLAIN MUNI (9V9) 3 S UTC-6(-5DT) N43°45.97' W99°19.28'

OMAHA

1695 B S4 FUEL 100LL, JET A NOTAM FILE HON

L-12H

RWY 13-31: H4300X75 (ASPH) S-12.5 MIRL

IAP

RWY 13: PAPI(P2L)—GA 3.0° TCH 40'. Tree.

RWY 31: PAPI (P2L)—GA 3.0° TCH 40'.

RWY 18-36: 3400X150 (TURF)

RWY 18: Pole.

AIRPORT REMARKS: Attended continuously. Fuel avbl 24 hrs with credit card. Waterfowl on and invof arpt. Ultralight activity on and invof arpt. Rwy 18 A-frame markings—black and yellow. Rwy 36 A-frame markings—black and yellow. MIRL Rwy 13-31 preset on low ints, to increase ints and ACTIVATE PAPI Rwy 13 and Rwy 31—CTAF.

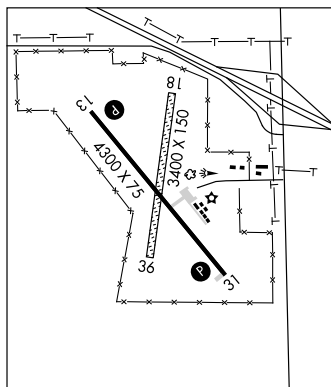
COMMUNICATIONS: CTAF/UNICOM 122.8

® MINNEAPOLIS CENTER APP/DEP CON 125.1

RADIO AIDS TO NAVIGATION: NOTAM FILE PIR.

PIERRE (L) VORTACW 112.5 PIR Chan 72 N44°23.67'

W100°09.77' 125° 52.4 NM to fld. 1789/11E. HIWAS.

**CHAN GURNEY MUNI** (See YANKTON)**CHEYENNE EAGLE BUTTE** (See EAGLE BUTTE)**CLARK CO** (8D7) 2 NE UTC-6(-5DT) N44°53.70' W97°42.67'

TWIN CITIES

1792 B FUEL 100LL NOTAM FILE HON

L-12H, 14G

RWY 13-31: H3700X60 (ASPH) S-13 MIRL

RWY 13: Road.

RWY 03-21: 2800X100 (TURF)

RWY 03: Road. RWY 21: Tree belt.

AIRPORT REMARKS: Unattended. For fuel call 605-532-3862. Rwy 03-21 CLOSED indefinitely due to wet conditions. Wildlife on and invof arpt. Rwy 03-21 SW end of rwy soft when wet. Rwy 03-21 marked with yellow and black split barrels. ACTIVATE MIRL Rwy 13-31—CTAF.

COMMUNICATIONS: CTAF/UNICOM 122.8**RADIO AIDS TO NAVIGATION:** NOTAM FILE ATY.

WATERTOWN (L) VORTACW 116.6 ATY Chan 113 N44°58.78' W97°08.51' 249°24.8 NM to fld. 1762/9E.

HIWAS.

CLEAR LAKE MUNI (5H3) 1 N UTC-6(-5DT) N44°46.28' W96°41.29'

TWIN CITIES

1801 B NOTAM FILE HON

RWY 13-31: 3000X150 (TURF) LIRL

RWY 13: Road. RWY 31: P-line.

RWY 02-20: 2130X150 (TURF)

RWY 20: Road.

AIRPORT REMARKS: Unattended. Arpt CLOSED winter months due to snow conditions, call 605-874-2121 for conditions. Wildlife on and invof arpt. Rwy 31 +4' fence 255' fm thld. Rwy 13-31 marked with yellow and black metal A-frame markers. ACTIVATE LIRL Rwy 13-31—CTAF.

COMMUNICATIONS: CTAF 122.9**CORSICA MUNI** (D65) 1 NE UTC-6(-5DT) N43°26.07' W98°23.85'

OMAHA

1579 B NOTAM FILE HON

RWY 17-35: 3400X150 (TURF) MIRL

RWY 17: Fence. RWY 35: Road.

AIRPORT REMARKS: Unattended. Rwy 17 A-frame rwy markings—red and white. Rwy 35 A-frame rwy markings—orange and white. Rwy 17-35 LIRL OTS indef. ACTIVATE MIRL Rwy 17-35—CTAF.

COMMUNICATIONS: CTAF 122.9

CUSTER CO (CUT) 2 SW UTC-7(-6DT) N43°44.00' W103°37.06'

CHEYENNE
H-2H, L-12F

5602 B S4 **FUEL** 100LL, JET A NOTAM FILE CUT

RWY 08-26: H5500X60 (ASPH) S-12.5 MIRL

RWY 08: PAPI(P4L)—GA 3.0° TCH 25'.

RWY 26: PAPI(P4L)—GA 3.7° TCH 48'. Trees.

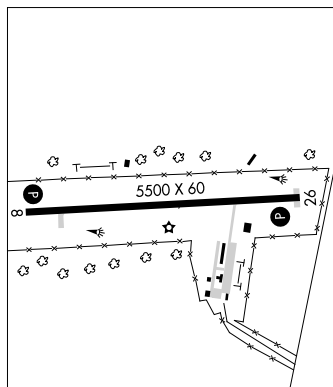
AIRPORT REMARKS: Attended May-Sep, Mon-Fri 1300-0200Z±, Sat-Sun 1400-2200Z±, Oct-Apr, Mon-Fri 1500-2300Z±. Fuel avbl 24 hrs with credit card. **CAUTION:** strong crosswinds and windshear may exist on final under windy conditions. Be Alert: check density altitude and lean mixture for best operation at this altitude. 10' wildlife fence around perimeter of arpt. Confirm winter conditions with arpt manager 605-673-3874. Airport beacon obscured radials 200°-260°. MIRL Rwy 08-26 opr dusk-0500Z±, after 0500Z± **ACTIVATE—CTAF.** **ACTIVATE** PAPI Rwy 08 and Rwy 26—CTAF.

WEATHER DATA SOURCES: ASOS 120.0 (605) 673-5744.

COMMUNICATIONS: CTAF/UNICOM 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE RAP.

RAPID CITY (H) VORTAC 112.3 RAP Chan 70 N43°58.56' W103°00.74' 228° 30.1 NM to fld. 3160/13E.



CUSTER STATE PARK (See FAIRBURN)

DESMET

WILDER (6E5) 2 N UTC-6(-5DT) N44°25.85' W97°33.67'

OMAHA
L-12H

1729 B NOTAM FILE HON

RWY 15-33: H3700X60 (ASPH) S-12.5 MIRL

RWY 15: PAPI(P2L)—GA 3.0° TCH 31'. Trees.

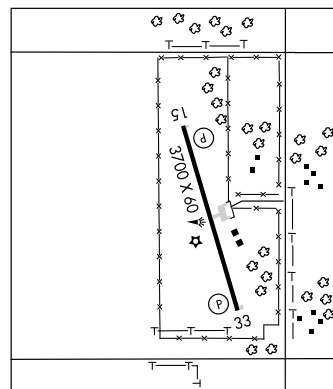
RWY 33: PAPI(P2L)—GA 3.0° TCH 34'. Road.

AIRPORT REMARKS: Unattended. **ACTIVATE** MIRL Rwy 15-33—CTAF.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE HON.

HURON (L) VORTAC 117.6 HON Chan 123 N44°26.40' W98°18.66' 081° 32.2 NM to fld. 1300/10E.



DUPREE N45°04.69' W101°42.91' NOTAM FILE HON.

BILLINGS

(H) **VORTACW** 116.8 DPR Chan 115 104° 4.2 NM to Dupree Muni. 2530/10E. **HIWAS.**

H-2G, L-12G, 14F

RCO 122.6 (HURON RADIO)

DUPREE MUNI (7F2) 0 SW UTC-7(-6DT) N45°03.00' W101°37.44'

BILLINGS

2341 NOTAM FILE HON

RWY 14-32: 2400X200 (TURF)

RWY 14: Road. **RWY 32:** Road.

AIRPORT REMARKS: Daylight use only. Emergency use only. Rwy 14-32 is rough and should be used for emergency use only. Rwy 14-32 marked with yellow and black A-frame markers.

COMMUNICATIONS: CTAF 122.9

EAGLE BUTTE

CHEYENNE EAGLE BUTTE (84D) 1 S UTC-7(-6DT) N44°59.06' W101°15.06' **BILLINGS**
2448 B NOTAM FILE HON **L-126, 14F**
RWY 13-31: H4200X60 (ASPH) S-12.5 MIRL 0.4% up SE **IAP**
RWY 13: Road.
AIRPORT REMARKS: Unattended. Wildlife on and invof arpt. ACTIVATE MIRL Rwy 13-31—122.8.
WEATHER DATA SOURCES: AWOS-A 122.8 (617) 262-3825.
COMMUNICATIONS: CTAF 122.9
MINNEAPOLIS CENTER APP/DEP CON 126 .8
RADIO AIDS TO NAVIGATION: NOTAM FILE HON.
DUPREE (H) VORTAC 116.8 DPR Chan 115 N45°04.69' W101°42.91' 096° 20.5 NM to fld. 2530/10E.
HIWAS.

EDGEMONT MUNI (6VØ) 1 SW UTC-7(-6DT) N43°17.72' W103°50.61' **CHEYENNE**
3605 B NOTAM FILE HON **L-12F**
RWY 12-30: H3900X60 (ASPH-AFSC) LIRL
RWY 16-34: 2015X100 (TURF)
RWY 16: Building. **RWY 34:** Fence.
AIRPORT REMARKS: Unattended. Wildlife on and invof arpt. Ultralight activity on and invof arpt. For LIRL Rwy 12-30 key
5 times—CTAF.
COMMUNICATIONS: CTAF 122.9
RADIO AIDS TO NAVIGATION: NOTAM FILE RAP.
RAPID CITY (H) VORTAC 112.3 RAP Chan 70 N43°58.56' W103°00.74' 209° 54.6 NM to fld. 3160/13E.

ELLSWORTH AFB (RCA)(KRCA) AF 5 SW UTC-7(-6DT) N44°08.71' W103°06.21'

CHEYENNE

3276 B S4 TPA—See Remarks NOTAM FILE RCA Not insp.

H-2H, L-12G

RWY 13-31: H13503X300 (CONC) PCN 123 R/B/X/T HIRL

DIAP, AD

RWY 13: REIL. ALSF1. PAPI(P4L).

RWY 31: REIL. ALSF1. PAPI(P4L).

MILITARY SERVICE: LGT Rwy 13 and Rwy 31 ILS & PAPI GS are not on coincidental.

JASU (AM32A-95) (A/M32A-86) **FUEL J8** **FLUID** SP LPOX LOX-48 hr prior notice rqr.

OIL 0-132-133-148 **TRAN ALERT** Svc avbl Mon-Fri 1500-2300Z, clsd Sat, Sun and holidays. If afld is open trans avbl on Sat and Sun from 1500-2300Z. Transient acft not allowed when transient alert not avbl. No fleet svc avbl.

MILITARY REMARKS: Opr Mon-Thu 1400-0730Z, Fri 1400-0300Z, CLOSED, Sat, Sun ACC down days and holidays.

See Flip AP/1 Supplementary Arpt Information. **RSTD** All acft maintain at or abv 7700' and 2640' horizontal separation in the immediate vicinity of Mt. Rushmore, avoid Devils Twr by 5 NM. PPR all full stop acft ctc base ops no earlier than 72 hr prior to ETA. Fax DSN 675-1053, C605-385-1053. BWC-(severe) no APP/DEP without 28 OG/CC approval. (Moderate) takeoff/approaches with squadron ops officer or higher PPR only. Req BWC update before each approach prior to reaching the final apch fix. (Low) normal operating procedures in effect. **CAUTION** Extensive general aviation and commercial traffic in vicinity of Rapid City Arpt 6.5 NM SE of arpt. When on visual apch to Rwy 31 exercise extreme caution for civil high intensity parking lot lgt located 6600' from end of rwy and in line with apch lgt system. Migratory bird activity Aug-Nov (phase II) and Mar-May (phase II), sfc to 5000' AGL. Deer hazard, report any activity to Twr/PTD. **TFC PAT** TPA-Rectangular 4500(1224), overhead 5000(1724). Avoid over flight of base proper when circling to ldg. **MISC** Inbound VIP Code 7 or higher, ctc Raymond 33 15 min prior to block time with name, rank and purpose of visit. The Pride hangar is located just N of the base WX station. The height and size of the hangar blocks 20% of the horizon and hinders obsn of thunderstorm and other convective clouds. From the obs point, WX technicians are unable to see the tdz of both rwys. The S end wind sensor typically reads 10-15 kts lower than the N end during strong N wind events.

AMOPS avbl to store classified up to secret, COMSEC issuing not avbl from AMOPS.

COMMUNICATIONS: SFA **ATIS** 120.625 269.9 (Mon-Fri 1400-0700Z, closed Sat, Sun and holidays) **PTD** 372.2

(R) APP CON 119.5 259.1 (Opr 24 hrs, from Mon 1200Z thru Sat 0400Z Sat, Sun, 1200-0400Z)

(R) DEP CON 119.5 289.4 (Opr 24 hrs, from Mon 1200Z thru Sat 0400Z Sat, Sun, 1200-0400Z) other times etc.

DENVER CENTER APP/DEP CON 127.95 338.2 (Opr 24 hrs, from Sat 0400Z thru Mon 1200Z, Sat, Sun 0400-1200Z)

TOWER 126.05 353.5 Mon-Thu 1400-0730Z, Fri 1400-0300Z, clsd Sat, Sun, ACC down days and holidays.

GN D CON 121.8 275.8

COMD POST (Raymond 33) 321.0 (Have Quick timing avbl 287.7.)

PMSV METRO 375.775 (Full svc avbl during afld opr hrs (see NOTAM), limited svc other times. Remote briefing svc avbl Scott AFB 15 OWS DSN 576-9755, C618-256-9755.)

AIRSPACE: CLASS D svc Mon-Thu 1400-0730Z, Fri 1400-0300Z, closed Sat, Sun, ACC down days, and holidays other times CLASS E.

RADIO AIDS TO NAVIGATION: NOTAM FILE RAP.

RAPID CITY (H) VORTAC 112.3 RAP Chan 70 N43°58.56' W103°00.74' 326° 10.9 NM to fld. 3160/13E.

(L) **TACAN** Chan 25 RCA (108.8) N44°08.34' W103°06.11' at fld. 3219/11E. NOTAM FILE RCA. No

NOTAM MP Mon 1330-1630Z. TACAN unusable 010°-020° byd 20 NM blo 10,000'.

ILS 111.5 I-ELR Rwy 13. Class IT. No NOTAM MP Tue, Thu 1300-1530Z.

ILS 110.3 I-RCA Rwy 31. Class IT. No NOTAM MP Tue, Thu 1300-1530Z.

ASR No-NOTAM MP Tue, Thu 1300-1530Z, clsd Sat, Sun, holidays other times Class E. Radar see Terminal FLIP for Radar Minima.

EUREKA MUNI (3W8) 2 N UTC-6(-5DT) N45°48.00' W99°38.52'

TWIN CITIES

1935 B NOTAM FILE HON

L-14G

RWY 12-30: H3100X60 (ASP-AFSC) LIRL

RWY 07-25: 2100X150 (TURF)

RWY 07: Fence.

AIRPORT REMARKS: Unattended. Wildlife on and invof arpt. Rwy 07-25 marked with yellow and black metal A-frame markers. ACTIVATE LIRL Rwy 12-30-122.8.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE ABR.

ABERDEEN (H) VOR/DME 113.0 ABR Chan 77 N45°25.04' W98°22.12' 287° 58.3 NM to fld. 1301/7E.

FAIRBURN**CUSTER STATE PARK** (3VØ) 6 NW UTC-7(-6DT) N43°43.50' W103°21.03'**CHEYENNE**

L-126

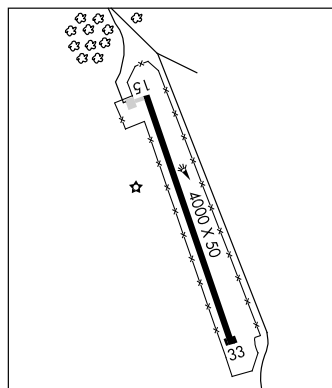
3980 B NOTAM FILE HON

RWY 15-33: H4000X50 (ASPH) S-12.5 LIRL**RWY 15:** Trees. **RWY 33:** Rgt tfc.**AIRPORT REMARKS:** Unattended. Wildlife on and invof arpt, be alert.

Rising terrain to the North. Be alert for increased rwy gradient when taking off on Rwy 33, density altitude and rising terrain may necessitate a departure fm Rwy 15 for safe flight. Check density altitude and lean mixture for best engine operation at this altitude. ACTIVATE LIRL Rwy 15-33—CTAF.

COMMUNICATIONS: CTAF 122.9**RADIO AIDS TO NAVIGATION:** NOTAM FILE RAP.

RAPID CITY (H) VORTAC 112.3 RAP Chan 70 N43°58.56'
W103°00.74' 211° 21 NM to fld. 3160/13E.

**FAITH MUNI** (DØ7) 1 E UTC-7(-6DT) N45°02.17' W102°01.19'**BILLINGS**

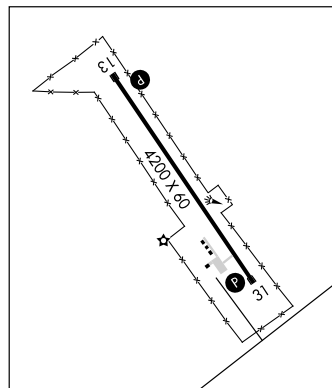
L-126, 146

2582 B S2 **FUEL** 100LL NOTAM FILE HON**RWY 13-31:** H4200X60 (ASPH) S-12.5 MIRL**RWY 13:** PAPI(P2L). **RWY 31:** PAPI (P2L) Road.

AIRPORT REMARKS: Unattended. Wildlife on and invof arpt. ACTIVATE MIRL Rwy 13-31 and PAPI Rwy 13 and Rwy 31—CTAF.

COMMUNICATIONS: CTAF 122.8**RADIO AIDS TO NAVIGATION:** NOTAM FILE HON.

DUPREE (H) VORTACW 116.8 DPR Chan 115 N45°04.69'
W101°42.91' 249° 13.2 NM to fld. 2530/10E. **HIWAS.**

**FAULKTON MUNI** (3FU) 1 E UTC-6(-5DT) N45°01.82' W99°06.76'**TWIN CITIES**

L-12H, 146

1569 B NOTAM FILE HON

RWY 13-31: H3000X60 (ASPH) S-12.5 LIRL**RWY 13:** Thld dsplcd 225'. Road. **RWY 31:** Fence.**AIRPORT REMARKS:** Unattended.**COMMUNICATIONS:** CTAF 122.9**RADIO AIDS TO NAVIGATION:** NOTAM FILE ABR.

ABERDEEN (H) VOR/DME 113.0 ABR Chan 77 N45°25.04' W98°22.12' 227° 39.2 NM to fld. 1301/7E.

FLANDREAU MUNI (4P3) 3 S UTC-6(-5DT) N44°00.23' W96°35.59'OMAHA
L-121

1645 B NOTAM FILE HON

RWY 10-28: H3100X60 (ASPH) S-12.5 LIRL

RWY 10: PAPI(P2L)—GA 3.0° TCH 25'. Trees.

RWY 28: PAPI(P2L)—GA 3.0° TCH 25'. Road.

AIRPORT REMARKS: Unattended. Wildlife on and in/ov arpt. ACTIVATE LIRL Rwy 10-28; PAPI Rwy 10 and 28—CTAF.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE BKK.

BROOKINGS (T) VORW/DME 108.8 BKK Chan 25 N44°18.20' W96°48.91' 146° 20.4 NM to fld. 1641/6E.

GETTYSBURG MUNI (ØD8) 1 S UTC-6(-5DT) N44°59.20' W99°57.17'

TWIN CITIES

2062 B S4 FUEL 100LL, JET A NOTAM FILE HON

L-12H, 14G

RWY 13-31: H4400X75 (ASPH) S-12.5 MIRL

IAP

RWY 13: PAPI(P2L)—GA 3.0° TCH 30'. Pole.

RWY 31: PAPI(P2L)—GA 3.0° TCH 29'.

RWY 04-22: 2505X150 (TURF) 0.5% up NE

AIRPORT REMARKS: Attended Mon-Sat daltg hrs, Sun irregularly. For fuel call 605-765-9197/9782. Wildlife on and in/ov arpt. Rwy 04-22 marked with orange and black metal A-frame markers. ACTIVATE MIRL Rwy 13-31—CTAF.

WEATHER DATA SOURCES: AWOS-A 122.9 (617) 262-3825.

COMMUNICATIONS: CTAF/UNICOM 122.8

MINNEAPOLIS CENTER APP/DEP CON 125.1

RADIO AIDS TO NAVIGATION: NOTAM FILE PIR.

PIERRE (L) VORTACW 112.5 PIR Chan 72 N44°23.67' W100°09.77' 003° 36.6 NM to fld. 1789/11E.

HIWAS.

GRAHAM FLD (See NORTH SIOUX CITY)**GREGORY MUNI-FLYNN FLD** (9D1) 1 SE UTC-6(-5DT) N43°13.31' W99°24.20'

OMAHA

2168 B S2 FUEL 100LL, JET A NOTAM FILE HON

L-12H

RWY 13-31: H3800X60 (ASPH) S-12.5 MIRL

IAP

RWY 13: PAPI(P2L)—GA 3.0° TCH 31'. Trees.

RWY 31: PAPI(P2L)—GA 3.0° TCH 32'.

AIRPORT REMARKS: Attended dawn-dusk. Rwy 13-31 surface has coal tar rejuvenator. ACTIVATE MIRL Rwy 13-31 and PAPI Rwy 13 and Rwy 31—CTAF.

WEATHER DATA SOURCES: AWOS-A 122.8 (617) 262-3825.

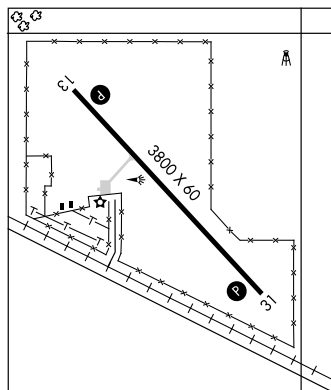
COMMUNICATIONS: CTAF/UNICOM 122.8

WINNER RCO 122.1R 112.8T (HURON RADIO)

RADIO AIDS TO NAVIGATION: NOTAM FILE ANW.

AINSWORTH (L) VORW/DME 112.7 ANW Chan 74 N42°34.15'

W99°59.38' 024° 46.9 NM to fld. 2582/9E. HIWAS.

**GROTON MUNI** (2E6) 5 N UTC-6(-5DT) N45°32.06' W98°05.71'

TWIN CITIES

1305 NOTAM FILE HON

RWY 15-33: 2070X140 (TURF)

RWY 15: Antenna.

RWY 33: Road.

AIRPORT REMARKS: Unattended. SE 170' of Rwy 15-33 CLSD indefly. Arpt not recommended for winter use. Arpt CLOSED Dec-Apr except PPR 605-397-8422. Rwy 15-33 marked with yellow/black wood a-frames.

COMMUNICATIONS: CTAF 122.9

HARDING CO (See BUFFALO)**HAROLD DAVIDSON FLD** (See VERMILLION)

HERREID MUNI (5T4) 1 N UTC-6(-5DT) N45°51.25' W100°04.52'

TWIN CITIES

1725 NOTAM FILE HON

RWY 12-30: H2230X200 (ASPH-TURF)

RWY 30: Road.

AIRPORT REMARKS: Unattended. Wildlife on and in/ovf arpt. Rwy 12 marked with orange/black metal markers. Rwy 30 marked with orange/black metal markers.

COMMUNICATIONS: CTAF 122.9

HIGHMORE MUNI (9DØ) 1 N UTC-6(-5DT) N44°32.50' W99°26.77'

TWIN CITIES

1854 B S2 NOTAM FILE HON

L-12H

RWY 12-30: H3700X60 (ASPH) LIRL

RWY 12: Fence RWY 30: Road

AIRPORT REMARKS: Unattended. ACTIVATE LIRL Rwy 12-30—CTAF.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE PIR.

PIERRE (L) VORTACW 112.5 PIR Chan 72 N44°23.67' W100°09.77' 063° 32.0 NM to fld. 1789/11E. HIWAS

HOT SPRINGS MUNI (HSR) 5 SE UTC-7(-6DT) N43°22.10' W103°23.30'

CHEYENNE

3150 B FUEL 100LL NOTAM FILE HON

L-12G

RWY 01-19: H4506X100 (ASPH) S-7 MIRL

IAP

RWY 01: PAPI(P2L)—GA 3.0° TCH 29'. Trees.

RWY 19: PAPI(P2L)—GA 3.0° TCH 31'. Fence.

RWY 06-24: 3946X250 (TURF)

AIRPORT REMARKS: Attended Mon-Fri 1500-0000Z±. Fuel avbl 24 hrs with credit card. Birds on and in/ovf arpt. Glider ops on and in/ovf arpt. Rwy 06-24 marked with black and white cones. ACTIVATE MIRL Rwy 01-19 and PAPI Rwy 01 and Rwy 19—CTAF.

WEATHER DATA SOURCES: AWOS-A 122.8 (617) 262-3825.

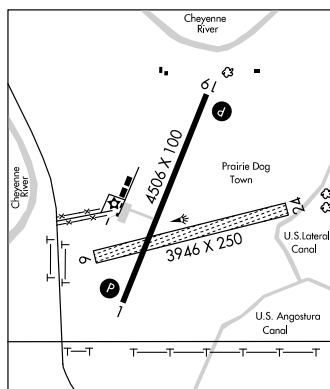
COMMUNICATIONS: CTAF/UNICOM 122.8

DENVER CENTER APP/DEP CON 127.95

RADIO AIDS TO NAVIGATION: NOTAM FILE RAP.

RAPID CITY (H) VORTAC 112.3 RAP Chan 70 N43°58.56'

W103°00.74' 191° 40.0 NM to fld. 3160/13E.



HOVEN MUNI (9F8) 2 NW UTC-6(-5DT) N45°15.45' W99°47.87'

TWIN CITIES

1884 B FUEL 100LL NOTAM FILE HON

L-12H, 14G

RWY 13-31: H3700X60 (ASPH) S-12.5 MIRL

RWY 31: PAPI(P2L)—GA 3.0° TCH 28'. Highway.

AIRPORT REMARKS: Unattended. Birds and deer on and in/ovf arpt. Church steeple 2029' MSL 6800' from Rwy 31 thld. Rwy 31 PAPI OTS indef. ACTIVATE MIRL Rwy 13-31, PAPI Rwy 31—CTAF.

COMMUNICATIONS: CTAF 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE PIR.

PIERRE (LVORTACW 112.5 PIR Chan 72 N44°23.67' W100°09.77' 006° 54.1 NM to fld. 1789/11E. HIWAS

HOWARD MUNI (8D9) 1 N UTC-6(-5DT) N44°01.75' W97°32.27'

OMAHA

1582 B NOTAM FILE HON

RWY 13-31: 2672X150 (TURF) LIRL

RWY 13: Road.

RWY 18-36: 1932X150 (TURF)

RWY 18: P-line. RWY 36: Fence.

AIRPORT REMARKS: Unattended. Wildlife on and in/ovf arpt. Rwy 18-36 marked with new white/black marker cones. ACTIVATE LIRL Rwy 13-31—CTAF.

COMMUNICATIONS: CTAF 122.9

HURON RGNL (HON) 0 NW UTC-6(-5DT) N44°23.11' W98°13.71'**OMAHA**

1289 B S4 FUEL 100LL, JET A OX 4 TPA-2101(812) ARFF Index—See Remarks

H-21, L-12H

NOTAM FILE HON

IAP

RWY 12-30: H7201X100 (CONC-GRVD) S-75, D-150, 2S-175,

2D-280, 2D/2D2-395 HIRL

RWY 12: MALSR. PAPI(P4L)—GA 3.0° TCH 50'.**RWY 30:** REIL. PAPI(P4L)—GA 3.0° TCH 50'. Antenna.**RWY 17-35:** H5000X75 (CONC) S-40, D-55 MIRL**RWY 17:** REIL. PAPI(P4L)—GA 3.0° TCH 27'.**RWY 35:** REIL. PAPI(P4L)—GA 3.0° TCH 23'.**RUNWAY DECLARED DISTANCE INFORMATION****RWY 12:** TORA-7201 TODA-7201 ASDA-7201 LDA-7201**RWY 17:** TORA-5000 TODA-5000 ASDA-5000 LDA-5000**RWY 30:** TORA-7201 TODA-7201 ASDA-7201 LDA-7201**RWY 35:** TORA-5000 TODA-5000 ASDA-5000 LDA-5000

AIRPORT REMARKS: Attended 1300Z±-SS. For attendant after hrs call 605-352-9262. Snow removal in progress Nov-Apr. Deer and game birds on and in/ovf arpt. Agricultural acft spraying in/ovf arpt Apr-Aug. Class II, ARFF Index A. PPR 1 hr for unscheduled air carrier ops with more than 30 passenger seats call arpt manager 605-353-8516. Rwy 17-35 not avbl for air carrier ops.

Scheduled air carrier ops acft designed for 10-30 passenger seats and unscheduled air carrier ops involving acft designed for 31 plus passenger seats are not authorized under PART 139 to operate at HON in excess of 15 mins before or after scheduled arrival/departure times. ARFF Index B avbl on request with PPR, ctc arpt manager 605-353-8516. Coordinate scheduled changes with arpt manager to assure ARFF avbl call 605-353-8516. HIRL Rwy 12-30 preset on low ints SS-0400Z±, to increase ints and ACTIVATE MALSR Rwy 12, REIL Rwys 17, 35 and Rwy 30 and MIRL Rwy 17-35—123.0. PAPI Rwy 12, Rwy 17, Rwy 30 and Rwy 35 opr SR-0400Z±; other times ACTIVATE-123.0.

WEATHER DATA SOURCES: ASOS 118.125 (605) 352-7531.**COMMUNICATIONS:** CTAF 123.6 UNICOM 123.0

RCO 123.6 122.6 122.2 122.1R. (HURON RADIO)

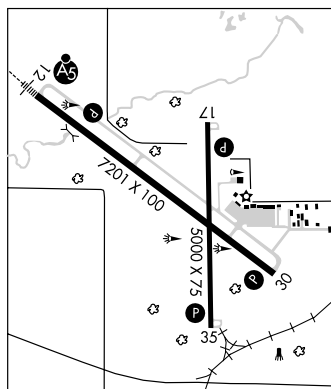
MINNEAPOLIS CENTER APP/DEP CON 126.25

RADIO AIDS TO NAVIGATION: NOTAM FILE HON.

(L) VORTAC 117.6 HON Chan 123 N44°26.40' W98°18.66' 123° 4.8 NM to fld. 1300/10E.

BEADY NDB (LOM) 302 HO N44°26.63' W98°20.21' 120° 5.8 NM to fld.

ILS/DME 110.3 I-HON Chan 40 Rwy 12 Class IE. LOM BEADY NDB.

COMM/NAV/WEATHER REMARKS: Ctc Huron Radio for airport advisory service on 123.6.**ISABEL MUNI** (3Y7) 0 SW UTC-7(-6DT) N45°23.37' W101°26.25'**BILLINGS**

2398 B NOTAM FILE HON

RWY 13-31: 3000X150 (TURF) LIRL**RWY 31:** Trees.

AIRPORT REMARKS: Unattended. Rwy 13-31 marked with 2' metal A-frames. ACTIVATE LIRL Rwy 13-31—CTAF 5 times.

COMMUNICATIONS: CTAF 122.9**JOE FOSS FLD** (See SIOUX FALLS)**KADOKA MUNI** (5V8) 1 E UTC-7(-6DT) N43°50.00' W101°29.83'**CHEYENNE**

2460 B NOTAM FILE HON

RWY 12-30: 2600X150 (TURF-GRVL) LIRL**RWY 12:** Antenna.**RWY 04-22:** 1600X100 (TURF)

AIRPORT REMARKS: Unattended. Center portion of Rwy 12-30 is turf/aggregate 2400'X50'. Rwy 12-30 few bumps on rwy due to local rodents. ACTIVATE LIRL Rwy 12-30—122.8.

COMMUNICATIONS: CTAF 122.9**KIMBALL MUNI** (6A6) 2 NW UTC-6(-5DT) N43°45.50' W98°58.69'**OMAHA**

1755 NOTAM FILE HON

RWY 13-31: 2600X250 (TURF)**RWY 13:** Road. **RWY 31:** Road

AIRPORT REMARKS: Unattended. Arpt CLOSED winter months. Rwy 13-31 A-Frame rwy markings black and yellow.

COMMUNICATIONS: CTAF 122.9

LAKE ANDES MUNI (8D8) 1 S UTC-6(-5DT) N43°08.88' W98°32.42'

OMAHA

1475 NOTAM FILE HON

RWY 12-30: 2600X250 (TURF)

RWY 12: Road. **RWY 30:** P-line.

AIRPORT REMARKS: Unattended. Arpt clsd for night ops. Wildlife on and invof arpt. Rwy 12 and Rwy 30 have black/yellow metal A-frame markers.

COMMUNICATIONS: CTAF 122.9

LAKE PRESTON MUNI (Y34) 0 SW UTC-6(-5DT) N44°21.44' W97°23.09'

OMAHA

1725 B NOTAM FILE HON

RWY 12-30: 2220X250 (TURF) LIRL

RWY 12: Fence. **RWY 30:** Road.

AIRPORT REMARKS: Unattended. Arpt CLOSED Nov 1-Apr 1 ctc arpt manager 605-847-4402 for PPR. Birds on and invof arpt. Rwy 12-30 marked with yellow and black metal A-frame markers. ACTIVATE LIRL Rwy 12-30—122.8.

COMMUNICATIONS: CTAF 122.9

LEMMON MUNI (LEM) 3 SE UTC-7(-6DT) N45°55.12' W102°06.37'

BILLINGS

2571 B S4 **FUEL** 100LL, JET A NOTAM FILE HON

L-14F

RWY 11-29: H4501X75 (ASPH) S-12.5 MIRL

IAP

RWY 11: PAPI(P2L)—GA 3.0° TCH 25'. Road. **RWY 29:** PAPI(P2L)—GA 3.0° TCH 25'.

RWY 07-25: 3300X120 (TURF)

AIRPORT REMARKS: Unattended. For fuel call 605-374-5281. ACTIVATE MIRL Rwy 11-29, PAPI Rwy 11 and 29—CTAF.

WEATHER DATA SOURCES: AWOS-A 122.8 (617) 262-3825.

COMMUNICATIONS: CTAF/UNICOM 122.8

MINNEAPOLIS CENTER APP/DEP CON 124.25

RADIO AIDS TO NAVIGATION: NOTAM FILE DIK.

DICKINSON (H) VORTACW 112.9 DIK Chan 76 N46°51.60' W102°46.41' 140° 62.9 NM to fld. 2520/14E. HIWAS.

(T) **VORW** 111.4 LEM N45°55.19' W102°06.22' at fld. (VFR Use Only) NOTAM FILE HON. Unmonitored. Out of svc indefinitely.

LICAN N44°48.20' W97°09.01' NOTAM FILE ATY.

TWIN CITIES

NDB (LOM) 215 AT 352° 6.7 NM to Watertown Rgnl.

MADISON MUNI (MDS) 1 NE UTC-6(-5DT) N44°00.98' W97°05.14'

OMAHA

1718 B S4 **FUEL** 100LL, JET A, MOGAS NOTAM FILE HON

H-21, L-12H

RWY 15-33: H5000X75 (ASPH-CONC) S-12.5 MIRL

IAP

RWY 15: REIL. PAPI(P4L)—GA 3.0° TCH 37'. Silo.

RWY 33: REIL. PAPI(P4L)—GA 3.0° TCH 37'. Trees.

RWY 03-21: 2400X200 (TURF)

AIRPORT REMARKS: Attended Mon-Sat 1400-0000Z†. Ultra-light activity on and invof arpt. Rwy 03-21 CLOSED 1 Nov-1 Apr except with PPR call 605-256-9774. Rwy 03-21 marked with black and white cones. ACTIVATE MIRL Rwy 15-33 and REIL Rwy 15 and Rwy 33—CTAF.

WEATHER DATA SOURCES: AWOS-3 118.35 (605) 427-9380.

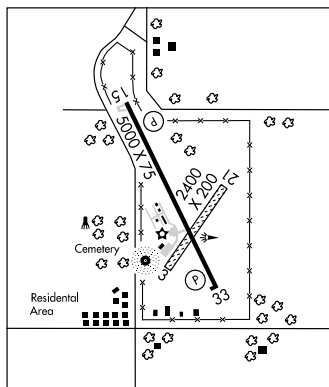
COMMUNICATIONS: CTAF/UNICOM 122.8

® **MINNEAPOLIS CENTER APP/DEP CON** 132.05

RADIO AIDS TO NAVIGATION: NOTAM FILE FSD.

SIoux FALLS (H) VORTACW 115.0 FSD Chan 97 N43°38.97' W96°46.87' 320° 25.7 NM to fld. 1570/9E. HIWAS.

WENTWORTH NDB (MHW) 400 MDS N44°00.80' W97°05.31' at fld. NOTAM FILE HON. NDB unmonitored.



MARV SKIE-LINCOLN CO (See TEA)

MARTIN MUNI (9V6) 1 SE UTC-7(-6DT) N43°09.94' W101°42.76'

CHEYENNE

3293 B S2 NOTAM FILE HON

L-12G

RWY 14-32: H3709X60 (ASPH) S-9 MRL 0.4% up NW

IAP

RWY 14: PAPI(P2L)—GA 3.0 TCH 25'. Road.

RWY 32: PAPI (P2L)—GA 3.0 TCH 25'.

AIRPORT REMARKS: Unattended. Wildlife on and invof arpt. ACTIVATE

MRL Rwy 14-32 and PAPI Rwy 14 and Rwy 32—122.9.

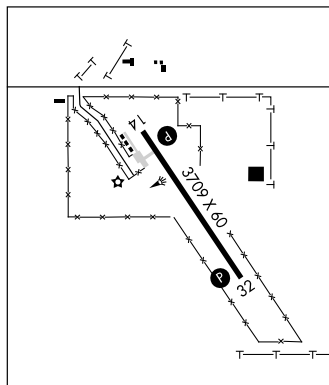
COMMUNICATIONS: CTAF/UNICOM 123.0

DENVER CENTER APP/DEP CON 127.95

RADIO AIDS TO NAVIGATION: NOTAM FILE PHP.

PHILIP (L) VORW/DME 108.4 PHP Chan 21 N44°03.50'

W101°39.85' 170° 53.5 NM to fld. 2340/12E. HIWAS.

**McINTOSH MUNI** (8D6) 1 S UTC-7(-6DT) N45°54.50' W101°20.77'

BILLINGS

2251 B NOTAM FILE HON

RWY 14-32: 3700X150 (TURF-GRVL) LIRL

RWY 14: Trees.

AIRPORT REMARKS: Unattended. Arpt CLOSED winter months due to lack of snow removal, call arpt manager on 605-273-4210 for arpt conditions. Rwy 14-32 turf rwy is rough due to heavy amount of rodent holes. Large prairie dog town adjacent to arpt. Condition of strip is monitored. Rwy 14-32 center 50' portion is turf/aggregate. Rwy 14 marked with yellow and black metal A-frame markers. Rwy 32 marked with yellow and black metal A-frame markers. ACTIVATE LIRL Rwy 14-32 key 122.8 5 times.

COMMUNICATIONS: CTAF 122.9**Mc LAUGHLIN MUNI** (5P2) 2 SE UTC-7(-6DT) N45°47.81' W100°47.06'

TWIN CITIES

2006 B S4 NOTAM FILE HON

L-14F

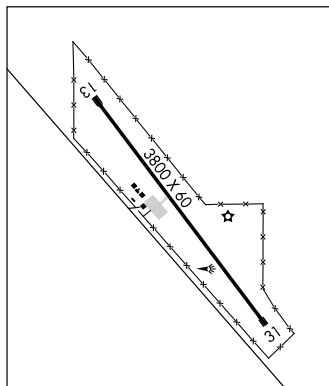
RWY 13-31: H3800X60 (ASPH-AFSC) S-12.5 LIRL

RWY 13: Fence.

AIRPORT REMARKS: Unattended. ACTIVATE LIRL Rwy 13-31—CTAF.**COMMUNICATIONS:** CTAF/UNICOM 122.8**RADIO AIDS TO NAVIGATION:** NOTAM FILE BIS.

BISMARCK (L) VORW/DME 116.5 BIS Chan 112 N46°45.71'

W100°39.92' 173° 58.1 NM to fld. 1841/12E. HIWAS.



MILBANK MUNI (1D1) 3 E UTC-6(-5DT) N45°13.83' W96°33.97'

TWIN CITIES

1118 B S2 FUEL 100LL. JET A NOTAM FILE HON

L-121, 14H

RWY 13-31: H4000X60 (CONC) S-12.5 MIRL

IAP

RWY 13: PAPI(P2L)—GA 3.0° TCH 37'. RWY 31: PAPI(P2L)—GA 3.0° TCH 36'. Road.

RWY 07-25: 3607X150 (TURF)

RWY 07: Fence.

AIRPORT REMARKS: Attended Mon-Fri 1500-2100Z. Unattended holidays. Fuel avbl 24 hrs with credit card. Rwy 07-25 CLOSED winter months. Ultralight on and invof arpt. Rwy 07-25 marked with black and orange 'A' frames. ACTIVATE MIRL Rwy 13-31 —CTAF.

COMMUNICATIONS: CTAF/UNICOM 122.8

MINNEAPOLIS CENTER APP/DEP CON 128.5

RADIO AIDS TO NAVIGATION: NOTAM FILE ATY.

WATERTOWN (L) VORTACW 116.6 ATY Chan 113 N44°58.78' W97°08.51' 049° 28.7 NM to fld. 1762/9E.

HIWAS.

MILLER MUNI (MKA) 2 E UTC-6(-5DT) N44°31.52' W98°57.49'

TWIN CITIES

1569 S2 FUEL 100LL, JET A NOTAM FILE HON

L-12H

RWY 15-33: H3600X60(ASPH) MIRL 0.3% up SE

IAP

RWY 15: PAPI(P2L)—GA 3.0° TCH 40'.

RWY 33: PAPI(P2L)—GA 3.0° TCH 35'. Pole.

AIRPORT REMARKS: Attended intermittently. For fuel call 605-853-2497, 871-3833. ACTIVATE MIRL Rwy 15-33 and PAPI Rwy 15 and Rwy 33—122.8.

WEATHER DATA SOURCES: AWOS-A 122.9 (617) 262-3825.

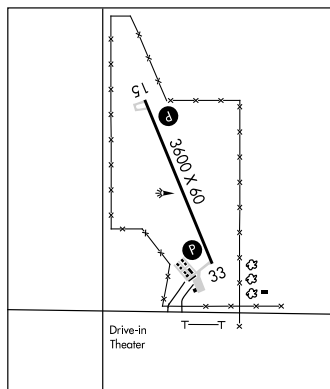
COMMUNICATIONS: CTAF 122.9

MINNEAPOLIS CENTER APP/DEP CON 125.1.

RADIO AIDS TO NAVIGATION: NOTAM FILE HON.

HURON (L) VORTAC 117.6 HON Chan 123 N44°26.40'

W98°18.66' 271° 28.3 NM to fld. 1300/10E.



MISSION SIOUX (ØV6) 2 E UTC-6(-5DT) N43°18.42' W100°37.69'

OMAHA

2605 B NOTAM FILE HON

L-12G

RWY 11-29: H3200X60 (ASPH-AFSC) S-12.5 LIRL

RWY 11: Fence RWY 29: Road.

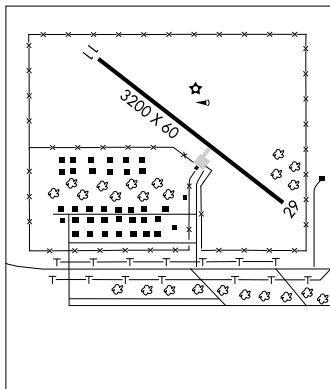
AIRPORT REMARKS: Unattended. ACTIVATE LIRL Rwy 11-29—CTAF.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE ANW.

AINSWORTH (L) VORW/DME 112.7 ANW Chan 74 N42°34.15'

W99°59.38' 319° 52.5 NM to fld. 2582/9E. HIWAS.



MITCHELL MUNI (MHE) 3 N UTC-6(-5DT) N43°46.49' W98°02.32'

1304 B S4 **FUEL** 100LL, JET A NOTAM FILE MHE

Rwy 12-30: H6700X100 (ASPH) S-55, D-90, 2S-114, 2D-120 HIRL

Rwy 12: REIL. PAPI(P4L)—GA 3.0° TCH 50'.

Rwy 30: MALSR. PAPI(P4L)—GA 3.0° TCH 60'.

Rwy 17-35: H5512X100 (ASPH-PFC) S-35, D-90, 2S-114, 2D-110 MIRL 0.4% up S

Rwy 17: REIL. PAPI(P4L)—GA 3.0° TCH 50'.

Rwy 35: PAPI(P4L)—GA 3.0° TCH 50'.

AIRPORT REMARKS: Attended 1400-0000Z†. For attendant other hrs call 605-996-1228. Fuel avbl 24 hrs a day. Ultralight activity on and infov arpt. Migratory birds on and infov arpt. ACTIVATE HIRL Rwy 12-30, MIRL Rwy 17-35, MALSR Rwy 30, REIL Rwy 12 and Rwy 17, PAPI Rwy 12, 30, 17 and 35—CTAF.

WEATHER DATA SOURCES: ASOS 124.175 (605) 995-5803. **HIWAS** 109.2 MHE.

COMMUNICATIONS: CTAF/UNICOM 122.8

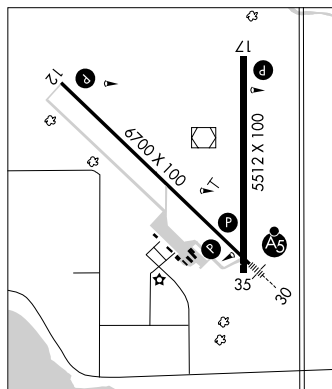
RCO 122.3 (HURON RADIO)

RADIO AIDS TO NAVIGATION: NOTAM FILE MHE.

(L) **VORW/DME** 109.2 MHE Chan 29 N43°46.62'

W98°02.25' at fld. 1301/7E. **HIWAS.**

ILS 109.7 I-LPA Rwy 30. GS unusable for auto pilot coupled approaches blo 2174' MSL.



OMAHA

H-21, L-12H

IAP

MOBRIDGE MUNI (MBG) 1 NE UTC-6(-5DT) N45°32.78' W100°24.38'

1716 B S4 **FUEL** 100LL, JET A, MOGAS NOTAM FILE MBG

Rwy 12-30: H4411X75 (ASPH) S-12.5 MIRL

Rwy 12: PAPI(P2L)—GA 3.0° TCH 31'. Ground.

Rwy 30: PAPI(P2R)—GA 3.0° TCH 31'. P-line.

Rwy 17-35: 2400X250 (TURF) 1.0% up N

Rwy 17: Road.

AIRPORT REMARKS: Attended 1400-0000Z†. For attendant other hrs call 605-845-2977. Rwy 17-35 CLOSED winter months. ACTIVATE MIRL Rwy 12-30—CTAF.

WEATHER DATA SOURCES: ASOS 121.425 (605) 845-2056.

COMMUNICATIONS: CTAF/UNICOM 122.8

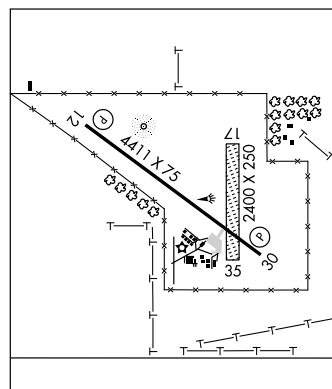
RCO 122.35 (HURON RADIO)

RADIO AIDS TO NAVIGATION: NOTAM FILE HON.

DUPREE (H) VORTACW 116.8 DPR Chan 115 N45°04.69'

W101°42.91' 053° 62.1 NM to fld. 2530/10E. **HIWAS.**

RIVERBEND NDB (MHW) 407 RVB N45°32.99' W100°24.61' at fld. NOTAM FILE MBG. NDB unmonitored.



TWIN CITIES

L-14F

IAP

MURDO MUNI (8F6) 3 S UTC-6(-5DT) N43°51.10' W100°42.72'

OMAHA
L-12G

2263 B NOTAM FILE HON

RWY 14-32: H3400X60 (ASPH) S-12.5 MIRL

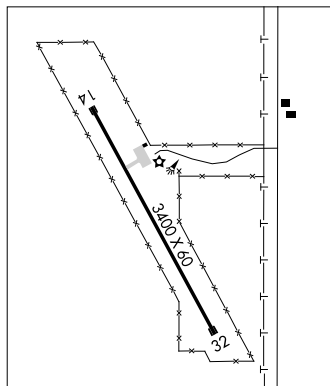
RWY 32: Fence.

AIRPORT REMARKS: Unattended. Wildlife on and in/ovf arpt. Rwy 14-32 surface has coal tar rejuvenator. For MIRL Rwy 14-32 key CTAF 5 times.

COMMUNICATIONS: CTAF 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE PIR.

PIERRE (L) VORTACW 112.5 PIR Chan 72 N44°23.67'
W100°09.77' 205° 40.3 NM to fld. 1789/11E. HIWAS.



NORTH SIOUX CITY

GRAHAM FLD (7K7) 1 N UTC-6(-5DT) N42°32.42' W96°29.10'

OMAHA

1106 B NOTAM FILE HON

RWY 15-33: 5300X36 (CONC-TURF)

RWY 15: Rgt tfc.

AIRPORT REMARKS: Unattended. Rwy 15-33 center 2237 X 36 (CONC). Rwy 15-33 width is 170'. Center of rwy has 36' of concrete. Concrete is in bad shape. Rwy is in poor shape.

COMMUNICATIONS: CTAF 122.9

ONIDA MUNI (98D) 2 W UTC-6(-5DT) N44°42.03' W100°06.05'

TWIN CITIES

1874 B S2 FUEL 100LL, JET A NOTAM FILE HON

L-12H

RWY 13-31: H3810X60 (ASPH) MIRL

RWY 13: PAPI(P2L)—GA 3.0° TCH 40'. RWY 31: PAPI(P2L). P-line.—GA 3.0° TCH 31'.

RWY 08-26: 2125X120 (TURF)

AIRPORT REMARKS: Unattended. Rwy 08-26 CLOSED winter months due to lack of snow removal. Ultra-light activity around arpt. 150' water tower 1.4 mile SE of Rwy 31. Rwy 08-26 marked with yellow and black A-frame markers at thld. ACTIVATE MIRL Rwy 13-31 and PAPI Rwy 13 and Rwy 31—CTAF.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE PIR.

PIERRE (L) VORTACW 112.5 PIR Chan 72 N44°23.67' W100°09.77' 357° 18.6 NM to fld. 1789/11E.
HIWAS.

PARKSTON MUNI (8V3) 1 SW UTC-6(-5DT) N43°22.75' W97°58.27'

OMAHA

1415 B NOTAM FILE HON

L-12H

RWY 15-33: H3600X60 (ASPH) S-12, D-12.5 MIRL

RWY 15: PAPI(P2L)—GA 3.0° TCH 43'. Pole.

RWY 33: PAPI(P2L)—GA 3.0° TCH 35'.

AIRPORT REMARKS: Attended continuously. ACTIVATE MIRL Rwy 15-33—122.8.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE MHE

MITCHELL (L) VORW/DME 109.2 MHE Chan 29 N43°46.62' W98°02.25' 166° 24.0 NM to fld. 1301/7E.
HIWAS.

PHILIP (PHP) 3 E UTC-7(-6DT) N44°02.88' W101°35.94'

CHEYENNE

2207 B **FUEL** 100LL NOTAM FILE PHP

L-12G

Rwy 12-30: H4000X75 (ASPH) S-12.5 HIRL 0.4% up NW

IAP

Rwy 12: PAPI(P2L). Pole.

Rwy 30: PAPI(P2L).

Rwy 05-23: 3600X150 (TURF)

Rwy 23: Tree.

AIRPORT REMARKS: Unattended. Fuel avbl 24 hrs with credit card. Rwy

05-23 marked with black/white cones. **ACTIVATE HIRL** Rwy

12-30, PAPI Rwy 12 and Rwy 30—CTAF.

WEATHER DATA SOURCES: ASOS 118.375 (605) 859-3281. **HIWAS** 108.4

PHP.

COMMUNICATIONS: CTAF/UNICOM 122.8

RCO 122.4 (HURON RADIO)

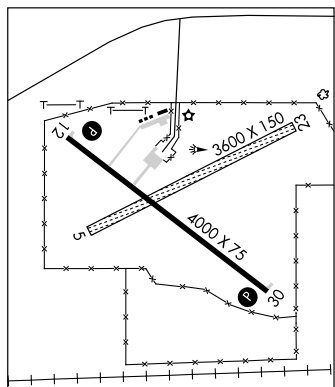
DENVER CENTER APP/DEP CON 127.95

RADIO AIDS TO NAVIGATION: NOTAM FILE PHP.

(L) **VORW/DME** 108.4 PHP Chan 21 N44°03.50'

W101°39.85' 090° 2.9 NM to fld. 2340/12E. **HIWAS.**

VOR unusable 250°-325° byd 30 NM blo 4500'.



PIERRE RGNL (PIR) 3 E UTC-6(-5DT) N44°22.96' W100°17.16'

OMAHA

1744 B S4 **FUEL** 100LL, JET A OX 1, 2, 3, 4 Class I, ARFF Index A NOTAM FILE PIR

H-21, L-12H

Rwy 13-31: H6900X100 (ASPH-GRVD) S-91, D-108, 2S-137, 2D-168 HIRL

IAP

Rwy 13: REIL. PAPI(P4L)—GA 3.0° TCH 52'.

Rwy 31: MALSR. PAPI(P4L)—GA 3.0° TCH 52'.

Rwy 07-25: H6881X150 (ASPH-GRVD) S-91, D-114, 2S-145,

2D-180 HIRL 0.6% up W

Rwy 07: REIL. PAPI(P4L)—GA 3.0° TCH 47'. Tank.

Rwy 25: REIL. PAPI(P4L)—GA 3.0° TCH 54'.

RUNWAY DECLARED DISTANCE INFORMATION

Rwy 07: TORA-6881 TODA-6881 ASDA-6881 LDA-6881

Rwy 13: TORA-6900 TODA-6900 ASDA-6900 LDA-6900

Rwy 25: TORA-6881 TODA-6881 ASDA-6881 LDA-6881

Rwy 31: TORA-6900 TODA-6900 ASDA-6900 LDA-6900

AIRPORT REMARKS: Attended Mon-Fri 1100-0600Z†, Sat-Sun

1100-0400Z†. For attendant other times call

605-224-9000/8621. Arpt conditions unmonitored during

0530-1000Z†. Numerous non-radio acft operating in area. Birds

on and infov arpt and within a 25 NM radius. No line of sight

between rwy ends of Rwy 07-25. ARFF provided for part 121 air

carrier ops only. 48 hr PPR for unscheduled acft ops involving acft

designed for 31+ passenger seats call 605-773-7447. Taxiway C

is 50' wide and restricted to acft 75,000 pounds or less. **ACTIVATE HIRL** Rwy 13-31 and Rwy 07-25, MALSR

Rwy 31, REIL Rwy 07, Rwy 13 and Rwy 25, PAPI Rwy 07, Rwy 25, Rwy 13 and Rwy 31—CTAF 122.7. NOTE: See

Special Notices Section—

Aerobatic Practice Areas.

WEATHER DATA SOURCES: ASOS 119.025 (605) 224-6087. **HIWAS** 112.5 PIR.

COMMUNICATIONS: CTAF 122.7 **UNICOM** 122.95

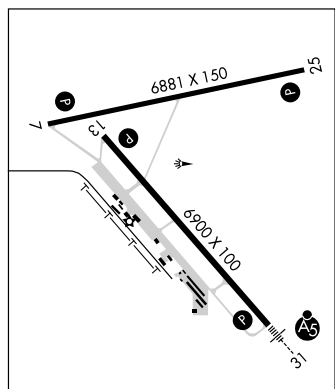
RCO 122.2 (HURON RADIO)

® **MINNEAPOLIS CENTER APP/DEP CON** 125.1

RADIO AIDS TO NAVIGATION: NOTAM FILE PIR.

(L) **VORTACW** 112.5 PIR Chan 72 N44°23.67' W100°09.77' 251° 5.3 NM to fld. 1789/11E. **HIWAS.**

ILS/DME 111.9 I-PIR Chan 56 Rwy 31. Class IA **ILS GS** unusable for coupled apch blo 2,255'.



PINE RIDGE (IEN) 2 E UTC-7(-6DT) N43°01.35' W102°30.66'

3333 B NOTAM FILE IEN

RWY 12-30: H5000X60 (ASPH) S-12 MIRL 0.7% up SE

RWY 12: P-line.

RWY 30: PAPI(P2L)—GA 3.0° TCH 26'. Fence.

RWY 06-24: H3003X50 (ASPH) S-12 0.7% up NE

RWY 24: Fence.

AIRPORT REMARKS: Unattended. Wildlife on and invof arpt. Rwy 06-24

CLOSED indef. MIRL Rwy 12-30 and PAPI Rwy 30 opr

dusk-0530Z‡, after 0530Z‡ ACTIVATE—CTAF.

WEATHER DATA SOURCES: ASOS 126.775 (605) 867-1584.

COMMUNICATIONS: CTAF 122.9

DENVER CENTER APP/DEP CON 127.95

RADIO AIDS TO NAVIGATION: NOTAM FILE RAP.

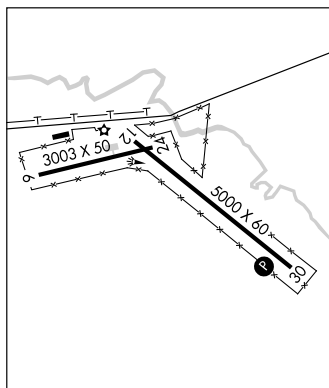
RAPID CITY (H) VORTAC 112.3 RAP Chan 70 N43°58.56'

W103°00.74' 146° 61.3 NM to fld. 3160/13E.

CHEYENNE

H-5B, L-12G

IAP



PLATTE MUNI (1D3) 1 NE UTC-6(-5DT) N43°24.20' W98°49.77'

1618 B S2 NOTAM FILE HON

RWY 14-32: H3100X60 (ASPH) LIRL

RWY 14: Tree. RWY 32: Trees. Rgt tfc.

AIRPORT REMARKS: Attended Mon-Sat 1400-2300Z‡. During winter months rwy could be slippery, confirm winter conditions with arpt manager call 605-337-2334/3923. Deer and other wildlife on and invof arpt. ACTIVATE LIRL Rwy 14-32—CTAF.

COMMUNICATIONS: CTAF/UNICOM 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE MHE.

MITCHELL (L) VORW/DME 109.2 MHE Chan 29 N43°46.62' W98°02.25' 230° 41.2 NM to fld. 1301/7E.

HIWAS.

OMAHA

L-12H

PRESHO MUNI (5P5) 1 E UTC-6(-5DT) N43°54.38' W100°02.22'

1760 B NOTAM FILE HON

RWY 10-28: 3350X150 (TURF-GRVL) LIRL

RWY 10: Road. RWY 28: Fence.

AIRPORT REMARKS: Unattended. Wildlife and waterfowl on and invof arpt. Rwy 10-28 center 52' gravel. Rwy 10-28 marked with yellow and black metal A-frame markers. ACTIVATE LIRL Rwy 10-28—CTAF.

COMMUNICATIONS: CTAF 122.9

OMAHA

RANCH N43°57.89' W102°59.93' NOTAM FILE RAP.

NDB (HW/LOM) 254 RA 324° 5.5 NM to Rapid City Rgnl.

CHEYENNE

L-12G

RAPID CITY RGNL (RAP) 8 SE UTC-7(-6DT) N44°02.72' W103°03.44'

CHEYENNE

3204 B S4 FUEL 100LL, JET A OX 3 ARFF Index—See Remarks NOTAM FILE RAP

H-2H, L-12G

RWY 14-32: H8701X150 (CONC-GRVD) S-140, D-190, 2S-175, 2D-300 HIRL

IAP, AD

RWY 14: REIL. PAPI(P4L)—GA 3.0° TCH 47'. 0.6% down.

RWY 32: MALSR. PAPI(P4L)—GA 3.0° TCH 54'. 0.5% up.

RWY 05-23: H3601X75 (ASPH) S-12.5 MIRL 0.9% up NE

RWY 05: PAPI(P4L)—GA 3.0° TCH 32'. Rgt tfc.

RWY 23: PAPI(P4L)—GA 3.0° TCH 26'. Road.

RUNWAY DECLARED DISTANCE INFORMATION

RWY 05: TORA-3601 TODA-3601 ASDA-3601 LDA-3601

RWY 14: TORA-8701 TODA-8701 ASDA-8701 LDA-8701

RWY 23: TORA-3601 TODA-3601 ASDA-3601 LDA-3601

RWY 32: TORA-8701 TODA-8701 ASDA-8701 LDA-8701

AIRPORT REMARKS: Attended continuously. CAUTION: Extensive military jet traffic in vicinity of and NNW of arpt. Birds on and in vicinity of arpt. Be alert do not mistake Ellsworth AFB, located 6.5 NM NNW for Rapid City Rgnl. 152' AGL twr 2.5 NM NNW of arpt. Line of sight is restricted between Rwy 14 and Rwy 23 physical ends. Twr has limited visibility of Twy T1 and Twy T2 and Twy B at AER Rwy 23. Rwy 05-23 not avbl for scheduled air carrier ops with acft designed for 10 plus passenger seats, and scheduled/unscheduled air carrier ops with acft designed for 31 plus passenger seats. ARFF Index "C" PPR, call airport manager 605-394-4195 or 605-593-3419. Rwy 32 touchdown runway visual range. When twr clsd ACTIVATE HIRL Rwy 14-32, MIRL Rwy 05-23, MALSR Rwy 32, PAPI Rwy 05, Rwy 23, Rwy 14 and Rwy 32, REIL Rwy 14 and Twy A and Twy B lgts—CTAF.

WEATHER DATA SOURCES: ASOS 118.525 (605) 393-2832.

COMMUNICATIONS: CTAF 125.85 UNICOM 122.95

RCO 122.65 122.1R 112.3T (HURON RADIO)

Ⓡ ELLSWORTH APP/DEP CON 119.5 (Opr 24 hrs, from Mon 1200Z thru Sat 0400Z, Sat, Sun 1200-0400Z), other times ctc DENVER CENTER 127.95.

TOWER 125.85 (1300-0500Z) GND CON 121.9

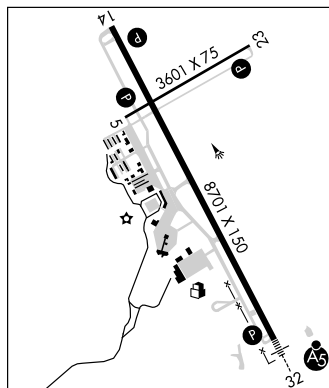
AIRSPACE: CLASS D svc 1300-0500Z other times CLASS E.

RADIO AIDS TO NAVIGATION: NOTAM FILE RAP.

(H) VORTAC 112.3 RAP Chan 70 N43°58.56' W103°00.74' 322° 4.6 NM to fld. 3160/13E

RANCH NDB (HW/LOM) 254 RA N43°57.89' W102°59.93' 324° 5.5 NM to fld.

ILS/DME 109.3 I-RAP Chan 30 Rwy 32. Class IE. LOM RANCH NDB.



REDFIELD MUNI (1D8) 1 SW UTC-6(-5DT) N44°51.75' W98°31.77'

TWIN CITIES

1307 B S2 FUEL 100LL NOTAM FILE HON

L-12H, 14G

RWY 13-31: H3300X60 (ASPH) S-13 LIRL

RWY 13: Tree. RWY 31: Trees.

RWY 01-19: 2600X250 (TURF)

RWY 19: Tree.

AIRPORT REMARKS: Unattended. Rwy 01-19 CLOSED winter months. Fuel avbl 24 hrs with credit card. Ultralight activity on and invof arpt. Migratory birds on and invof arpt. Rwy 01-19 marked with yellow and black metal A-frame markers.

COMMUNICATIONS: CTAF/UNICOM 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE HON.

HURON (L) VORTAC 117.6 HON Chan 123 N44°26.40' W98°18.66' 330° 27.0 NM to fld. 1300/10E.

RENEY N45°23.16' W98°19.70' NOTAM FILE ABR.

TWIN CITIES

NDB (LOM) 203 AB 307° 5.4 NM to Aberdeen Rgnl.

RIVERBEND N45°32.99' W100°24.61' NOTAM FILE MBG.

TWIN CITIES

NDB (MHW) 407 RVB at Mobridge Muni. NDB unmonitored.

L-14F

ROKKY N43°29.65' W96°49.73' NOTAM FILE FSD.

OMAHA

NDB (H/LOM) 245 FS 031° 6.5 NM to Joe Foss Fld. Unmonitored.

L-12I

SIOUX FALLS N43°38.97' W96°46.87' NOTAM FILE FSD.

OMAHA

(H) VORTACW 115.0 FSD Chan 97 148° 4.4 NM to Joe Foss Fld. 1570/9E. HIWAS.

H-5C, L-12I

VOR portion unusable 320°-360° byd 20 NM blo 4000'.

RCO 122.2 (HURON RADIO)

SIOUX FALLS

JOE FOSS FLD (FSD) 3 NW UTC-6(-5DT) N43°34.92' W96°44.52'

OMAHA

1429 B S4 FUEL 100LL, JET A OX 1, 3 Class I, ARFF Index B NOTAM FILE FSD
RWY 03-21: H8999X150 (CONC-WC) S-200, D-200, 2S-175, 2D-444 HIRL CLH-5C, L-121
IAP, AD

RWY 03: MALSR. PAPI(P4L). Tree.

RWY 21: MALSR. TDZL. VASI(V4L)—GA 3.0° TCH 51'. Railroad.

RWY 15-33: H8000X150 (CONC-GRVD) S-150, D-175, 2S-175, 2D-260 HIRL

RWY 15: REIL. PAPI(P4L)—GA 3.0° TCH 46'. Fence.

RWY 33: REIL. PAPI(P4L)—GA 3.0° TCH 42'. Trees.

RWY 09-27: H3152X75 (CONC-WC) S-30 MIRL

RWY 27: Poles.

RUNWAY DECLARED DISTANCE INFORMATION

RWY 03: TORA-8999 TODA-8999 ASDA-8999 LDA-8999

RWY 09: TORA-3152 TODA-3152 ASDA-3152 LDA-3152

RWY 15: TORA-8000 TODA-8000 ASDA-8000 LDA-8000

RWY 21: TORA-8999 TODA-8999 ASDA-8999 LDA-8999

RWY 27: TORA-3152 TODA-3152 ASDA-3152 LDA-3152

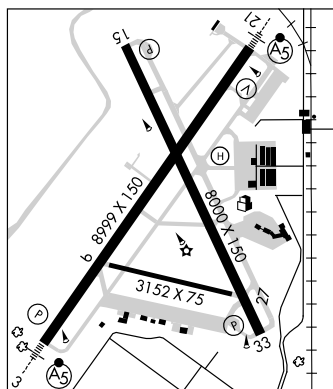
RWY 33: TORA-8000 TODA-8000 ASDA-8000 LDA-8000

ARRESTING GEAR/SYSTEM

RWY 03 ←BAK-14 BAK-12B(B) (1500')

BAK-14 BAK-12B(B) (1500') →RWY 21

RWY 15 ←BAK-14 BAK-12B(B) (1500')



BAK-14 BAK-12B(B) (1500') →RWY 33

AIRPORT REMARKS: Attended continuously. Waterfowl, birds and deer on and invof arpt. Migratory birds within 25 NM primarily between Mar-Nov. ATCT has limited visibility on Twy H, Twy G and Twy J between the east cargo ramp and Twy B. General aviation ramp restricted to 60,000 pounds. Rwy 09-27 avbl for taxi only, scheduled air carrier ops involve acft designed for 10 or more passengers seats and scheduled/unscheduled air carrier ops involv acft designed for 31 or more seats. Wide body acft must use wing walkers to taxi in front/behind parked F-16 acft. CAUTION: Marv skie—Lincoln county airport (Y14) located 7.2 miles sw of FSD and 2 miles east of Rokky has heavy VFR traffic. Arresting device BAK 14/12B(B) located 1500' fm apch end Rwy 15 and Rwy 33. Arresting device BAK 14/12B(B) located 1500' fm apch end Rwy 03 and Rwy 21. HIRL Rwy 03-21 and 15-33. MIRL Rwy 09-27 MALSR Rwy 03 and Rwy 21 preset on low ints 0600-1100Z†. To increase ints and ACTIVATE REIL Rwy 15 and 33—CTAF. From 0600-1100Z† ACTIVATE HIRL Rwy 03-21 and 15-33, MIRL Rwy 09-27 and REIL Rwy 15 and 33, MALSR Rwy 03 and Rwy 21—CTAF. VASI Rwy 21 and PAPI Rwy 03, 15 and 33 opr 24 hrs. Flight Notification Service (ADCUS) avbl Mon-Fri 1400-2200Z† call 605-338-4384. After hrs call 605-373-3523 prior to departure.

WEATHER DATA SOURCES: ASOS (605) 331-7833. HIWAS 115.0 FSD. LLWAS.**COMMUNICATIONS:** CTAF 118.3 ATIS 126.6 UNICOM 122.95

SIOUX FALLS RCO 122.2 (HURON RADIO)

R SIOUX FALLS APP/DEP CON 125.8 126.9 (1100-0600Z†)

MINNEAPOLIS CENTER APP/DEP CON 132.05 (0600-1100Z†)

SIOUX FALLS TOWER 118.3 (1100-0600Z†) GND CON 121.9

AIRSPACE: CLASS D svc 1100-0600Z† other times CLASS E.**RADIO AIDS TO NAVIGATION:** NOTAM FILE FSD.

SIOUX FALLS (H) VORTACW 115.0 FSD Chan 97 N43°38.97' W96°46.87' 148° 4.4 NM to fld. 1570/9E.

HIWAS.

ROKKY NDB(H/LOM) 245 FS N43°29.65' W96°49.73' 030° 6.5 NM to fld. Unmonitored.

ILS 109.9 I-FSD Rwy 03. Class ID. LOM ROKKY NDB. LOM unmonitored. ILS unmonitored when twr clsd. LOC unusable byd 30° left of course.

ILS 111.1 I-JOU Rwy 21. Class ID. ILS unmonitored when twr clsd.

ASR (1100-0500Z†)

HELIPAD H1: H50X50 (ASPH)

HELIPORT REMARKS: Helicopter landing ops rstd to helipad only. Perimeter lgts.

SISSETON MUNI (8D3) 3 E UTC-6(-5DT) N45°40.25' W96°59.77'

TWIN CITIES
L-14E

1161 B FUEL 100LL NOTAM FILE HON

RWY 16-34: H3400X60 (ASPH) S-12 MIRL

RWY 16: PAPI (P2L). Road. RWY 34: PAPI (P2L). Fence.

RWY 04-22: 1932X150 (TURF)

RWY 04: Poles. RWY 22: Tree.

AIRPORT REMARKS: Unattended. Fuel avbl 24 hrs with credit card. Rwy 04-22 CLOSED winter months. Waterfowl and gulls on and invof arpt. Rwy 04-22 marked with white cones.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE ATY.

WATERTOWN (L) VORTACW 116.6 ATY Chan 113 N44°58.78' W97°08.51' 359° 41.9 NM to fld. 1762/9E.
HIWAS.

SPEARFISH N44°19.63' W103°50.10'

CHEYENNE
L-13E

RCO 122.55 (HURON RADIO)

SPEARFISH

BLACK HILLS—CLYDE ICE FLD (SPF) 3 E UTC-7(-6DT) N44°28.87' W103°47.16'

CHEYENNE
H-2H, L-12F, 13E
IAP

3931 B S4 FUEL 100LL, JET A OX 1, 3 NOTAM FILE SPF

RWY 13-31: H6400X75 (ASPH) S-33, D-45 MIRL 0.4% up SE

RWY 13: PAPI(P4L)—GA 3.0° TCH 25'. Hill. Rgt tfc.

RWY 31: PAPI(P4L)—GA 3.0° TCH 25'. Road.

RWY 08-26: 3975X100 (TURF) 0.7% up W

RWY 04-22: 2023X150 (TURF) 2% up SW

RWY 04: Highway. RWY 22: Fence.

AIRPORT REMARKS: Attended 1430Z±-dusk. For attendant after hours call 605-642-2656/641-2787. Wildlife on and invof arpt. Rwy 22 4' fence 50' right 141' fm thld and 50' left 175' fm thld. Irregular ops in and out of private airfield located approximately 3300' S of arpt, check CTAF frequency for status. No snow removal on turf rwys, confirm conditions with arpt manager, call 605-642-4112/2656. Rwy 04-22 and Rwy 08-26 marked with black and white edge markers. ACTIVATE MIRL Rwy 13-31—CTAF.

WEATHER DATA SOURCES: AWOS-3 118.325 (605) 642-8536.

COMMUNICATIONS: CTAF/UNICOM 122.7

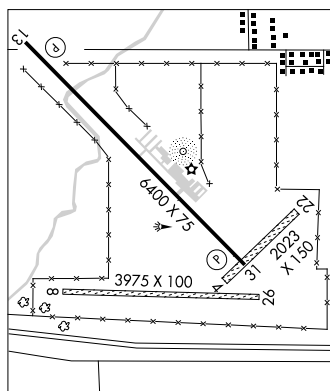
SPEARFISH RCO 122.55 (HURON RADIO)

ELLSWORTH APP/DEP 119.5 (Opr 24 hrs, from Mon 1200Z± thru Sat 0400Z±, Sat, Sun 1200-0400Z±), other times ctc DENVER CENTER 127.95.

RADIO AIDS TO NAVIGATION: NOTAM FILE RAP.

RAPID CITY (H) VORTAC 112.3 RAP Chan 70 N43°58.56' W103°00.74' 299° 45.0 NM to fld. 3160/13E.

NDB (MHW) 300 SPF N44°29.06' W103°47.06' at fld. NOTAM FILE SPF.



SPRINGFIELD MUNI (Y03) 1 N UTC-6(-5DT) N42°52.80' W97°54.07'

OMAHA
L-12H

1324 B S7 FUEL 100LL, JET A NOTAM FILE HON

RWY 15-33: H3500X60 (ASPH) S-12.5 MIRL

RWY 15: PAPI(P2L)—GA 3.0° TCH 25'. RWY 33: PAPI(P2L)—GA 3.0° TCH 25'. Road.

RWY 01-19: 1900X100 (TURF)

RWY 19: Fence.

AIRPORT REMARKS: Unattended. For fuel call 605-369-2426. Wildlife on and invof arpt. Rwy 01 has a fence 75' from thld; top of fence is 3' blo rwy end. Rwy 01-19 marked with yellow and black metal A-frame markers. ACTIVATE MIRL Rwy 15-33 and PAPI Rwy 15 and Rwy 33—CTAF.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE YKN.

YANKTON (L) VORW/DME 111.4 YKN Chan 51 N42°55.10' W97°23.10' 257° 22.9 NM to fld. 1301/7E.

STURGIS MUNI (49B) 4 E UTC-7(-6DT) N44°25.08' W103°22.53'

3243 B S4 FUEL 100LL, JET A NOTAM FILE HON
 RWY 11-29: H5100X60 (ASPH) S-12.5 MIRL 0.7% up NW
 RWY 11: PAPI(P2L). RWY 29: PAPI(P2L).

AIRPORT REMARKS: Attended dalgt hours. For attendant other hours call 605-347-3356. Wildlife on and invof arpt. Rwy 11-29 asphalt breaking up. ACTIVATE MIRL Rwy 11-29 and PAPI Rwy 11 and Rwy 29—CTAF.

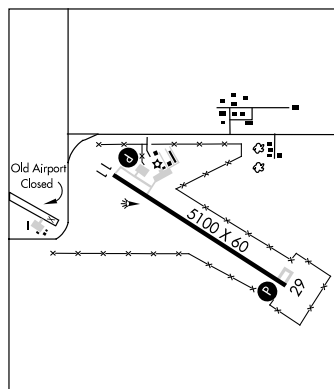
WEATHER DATA SOURCES: AWOS-A 122.8 (617) 262-3825.

COMMUNICATIONS: CTAF/UNICOM 122.8

ELLSWORTH APP/DEP CON 119.5 (Opr 24 hrs, from Mon 1200Z± thru Sat 0400Z±, Sat, Sun 1200-0400Z±), other times ctc DENVER CENTER 127.95.

RADIO AIDS TO NAVIGATION: NOTAM FILE RAP.

RAPID CITY (H) VORTAC 112.3 RAP Chan 70 N43°58.56' W103°00.74' 317° 30.8 NM to fld. 3160/13E.



CHEYENNE

H-2H, L-12G, 13E

IAP

TEA

MARY SKIE—LINCOLN CO (Y14) 2 NE UTC-6(-5DT) N43°27.29' W96°48.08'

OMAHA

L-12I

1515 B S4 FUEL 100LL, JET A NOTAM FILE HON
 RWY 16-34: H3650X60 (ASPH) S-22 MIRL

RWY 16: PAPI(P4L)—GA 3.0° TCH 22'. Road. RWY 34: PAPI(P4L)—GA 3.0° TCH 29'.

AIRPORT REMARKS: Attended 1400Z±-dusk. Fuel avbl 24 hrs with credit card. Ultralights on and invof arpt. Be alert: Acft on apch to Rwy 03 at Joe Foss Fld (FSD) descending/holding at 3300' over ROKKY LOM located 2.4 miles NNW of the arpt. Hay cutting operations May-Sep, farming equipment may be in apch zones. ACTIVATE MIRL Rwy 16-34—CTAF. NOTE: See Special Notices Section—Aerobatic Practice Areas.

WEATHER DATA SOURCES: AWOS-A 122.8 (617) 262-3825.

COMMUNICATIONS: CTAF/UNICOM 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE FSD.

SIoux FALLS (H) VORTACW 115.0 FSD Chan 97 N43°38.97' W96°46.87' 175° 11.7 NM to fld. 1570/9E. HIWAS.

THE SIGURD ANDERSON (See WEBSTER)

TIMBER LAKE MUNI (D58) 1 SW UTC-7(-6DT) N45°24.90' W101°04.99'

BILLINGS

2193 B S4 NOTAM FILE HON
 RWY 12-30: 3300X150 (TURF) LIRL
 RWY 30: Road.

RWY 17-35: 2400X120 (TURF)

RWY 17: Fence. RWY 35: Fence.

AIRPORT REMARKS: Attended dalgt hours. For field conditions call arpt manager 605-865-3500. Rwy 12-30 marked with yellow/black metal A-frame markers. Rwy 12-30 LIRL in poor condition. Rwy 12-30 LIRL OTS indef. ACTIVATE LIRL Rwy 12-30—122.8.

COMMUNICATIONS: CTAF 122.9

VERMILLION N42°45.80' W96°56.06' NOTAM FILE HON.

OMAHA

NDB (MHW) 375 VMR at Harold Davidson Fld. NDB unmonitored. SHUTDOWN.

L-12I

VERMILLION

HAROLD DAVIDSON FLD (VMR) 1 S UTC-6(-5DT) N42°45.92' W96°56.06'

OMAHA

1147 B S2 FUEL 100LL NOTAM FILE HON

L-121

RWY 12-30: H4105X75 (CONC) S-12 MIRL

IAP

RWY 12: PAPI(P4L)—GA 3.0° TCH 38'. Rgt tfc.

RWY 30: PAPI(P4L)—GA 3.0° TCH 38'. Trees.

AIRPORT REMARKS: Attended 1400-2300Z†. Fuel avbl 24 hrs with credit card. ACTIVATE MIRL Rwy 12-30, PAPI Rwy 12 and Rwy 30—CTAF.

WEATHER DATA SOURCES: AWOS-A 122.8 (617) 262-3825. Plus visibility.

COMMUNICATIONS: CTAF/UNICOM 122.8

YANKTON RCO 122.55 (HURON RADIO)

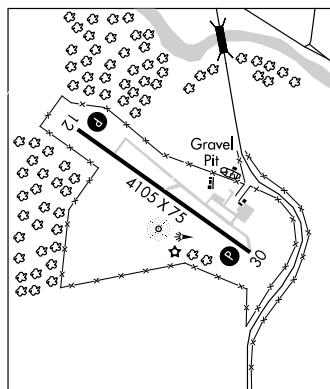
® SIOUX CITY APP/DEP CON 124.6 (1200-0330Z†)

MINNEAPOLIS CENTER APP/DEP CON 124.1 (0330-1200Z†)

RADIO AIDS TO NAVIGATION: NOTAM FILE YKN.

YANKTON (L) VORW/DME 111.4 YKN Chan 51 N42°55.10' W97°23.10' 108° 21.9 NM to fld. 1301/7E.

VERMILLION NDB (MHW) 375 VMR N42°45.80' W96°56.06' at fld. NOTAM FILE HON. NDB unmonitored. SHUTDOWN.



WAGNER MUNI (AGZ) 1 S UTC-6(-5DT) N43°03.80' W98°17.77'

OMAHA

1475 B S4 FUEL 100LL NOTAM FILE HON

L-12H

RWY 08-26: H3500X60 (ASPH) S-12.5 MIRL

RWY 08: P-line. RWY 26: Road.

RWY 14-32: 2228X150 (TURF)

RWY 14: Road. RWY 32: P-lines.

AIRPORT REMARKS: Attended Mon-Fri 1300-2300Z†. For attendant after hrs call 605-487-6262/491-0470. Rwy 14-32 CLOSED Nov 1-Apr 15. Spray acct operating invof arpt Apr-Nov. Wildlife on and invof arpt. Rwy 14 and Rwy 32 thlds are marked with yellow and black half barrels. MIRL Rwy 08-26 opr dusk-0600Z†, after 0600Z† ACTIVATE—CTAF.

COMMUNICATIONS: CTAF/UNICOM 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE ONL.

O'NEILL (H) VORTACW 113.9 ONL Chan 86 N42°28.23' W98°41.22' 016° 39.5 NM to fld. 2030/10E. HIWAS.

NDB (MHW) 392 AGZ N43°03.75' W98°17.54' at fld. NOTAM FILE HON. Unmonitored. VFR only.

WALL MUNI (6V4) 1 NW UTC-7(-6DT) N43°59.97' W102°15.28'

CHEYENNE

2813 B FUEL 100LL TPA-3813(1000) NOTAM FILE HON

L-12G

RWY 12-30: H3500X60 (ASPH) S-12 LIRL 0.4% up SE.

RWY 12: PAPI (P4L)—GA 3.0°.

RWY 30: PAPI (P4L)—GA 3.0° TCH 29'. Antenna.

AIRPORT REMARKS: Unattended. Fuel avbl by req. call 605-279-2666. Deer/antelope/waterfowl on and invof arpt. LIRL Rwy 12-30 and PAPI Rwy 12 and Rwy 30 opr dusk-0400Z†. After 0400Z† ACTIVATE CTAF.

COMMUNICATIONS: CTAF 122.8

RADIO AIDS TO NAVIGATION: NOTAM FILE PHP.

PHILIP (L) VORW/DME 108.4 PHP Chan 21 N44°03.50' W101°39.85' 250° 25.8 NM to fld. 2340/12E. HIWAS.

WATERTOWN RGNL (ATY) 2 NW UTC-6(-5DT) N44°54.84' W97°09.28'
 1749 B S4 FUEL 100LL, JET A Class I, ARFF Index A NOTAM FILE ATY
RWY 12-30: H6899X100 (ASPH-PFC) S-85, D-108, 2S-137, 2D-175 MIRL
RWY 12: REIL. PAPI(P4L)—GA 3.0° TCH 48'. Tree.
RWY 30: REIL. PAPI(P4L)—GA 3.0° TCH 34'. Tree.
RWY 17-35: H6894X100 (ASPH-PFC) S-85, D-108, 2S-137,
 2D-175 HIRL
RWY 17: REIL. PAPI(P4L)—GA 3.0° TCH 35'.
RWY 35: MALSR. PAPI(P4L)—GA 3.0° TCH 54'. Elevator.

RUNWAY DECLARED DISTANCE INFORMATION

RWY 12: TORA-6899 TODA-6899 ASDA-6899 LDA-6899
RWY 17: TORA-6894 TODA-6894 ASDA-6894 LDA-6894
RWY 30: TORA-6899 TODA-6899 ASDA-6899 LDA-6899
RWY 35: TORA-6894 TODA-6894 ASDA-6894 LDA-6894

AIRPORT REMARKS: Attended Mon-Fri 1300-0100Z†, Sat-Sun

1400-0000Z†. Glider ops May thru Sep. Gulls and geese on and
 in vol arpt Apr-Nov. Annually Apr-Sep hay cutting ops in progress,
 farming equip may be in apchs. PPR 48 hrs unscheduled air
 carrier ops with more than 30 passenger seats call arpt manager
 605-882-6209/886-4733. Air carrier ops involving acft with
 more than 9 passengers are not authorized in excess of 15
 minutes before or after scheduled arrival/departure times without
 prior coordination with arpt manager and confirmation that ARFF is avbl prior to landing or takeoff. ACTIVATE
 MALSR Rwy 35, HIRL Rwy 17-35, MIRL Rwy 12-30, REIL Rwy 12 and Rwy 30 and PAPI Rwy 12, Rwy 17, Rwy 30,
 and Rwy 35—CTAF.

WEATHER DATA SOURCES: ASOS 126.625 (605) 882-0578. HIWAS 116.6 ATY.

COMMUNICATIONS: CTAF/UNICOM 123.05

RCO 122.5 (HURON RADIO)

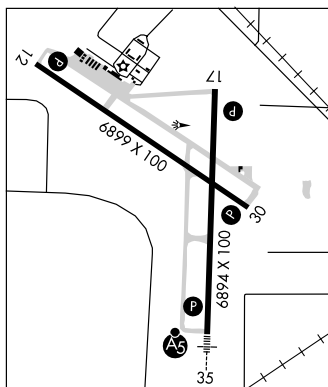
MINNEAPOLIS CENTER APP/DEP CON 128.5

RADIO AIDS TO NAVIGATION: NOTAM FILE ATY.

(L) VORTACW 116.6 ATY Chan 113 N44°58.78' W97°08.51' 179° 4.0 NM to fld. 1762/9E. HIWAS.

LICAN NDB (LOM) 215 AT N44°48.20' W97°09.01' 352° 6.7 NM to fld.

ILS/DME 111.9 I-ATY Chan 56 Rwy 35. Class IT. LOM LICAN NDB.



TWIN CITIES
 H-21, L-12H, 14G
 IAP

WEBSTER

THE SIGURD ANDERSON (1D7) 2 S UTC-6(-5DT) N45°17.56' W97°30.83'

TWIN CITIES
 L-12H, 14G

1854 B FUEL MOGAS NOTAM FILE HON

RWY 12-30: H3700X60 (ASPH) S-12.5 LIRL

RWY 12: Road.

RWY 01-19: 2200X150 (TURF)

RWY 01: Fence. **RWY 19:** Trees.

AIRPORT REMARKS: Unattended. Rwy 01-19 CLOSED winter months. Birds and waterfowl on and in vol arpt. Rwy 01-19
 marked with yellow and black metal A-frame markers. ACTIVATE LIRL Rwy 12-30—CTAF.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE ATY.

WATERTOWN (L) VORTACW 116.6 ATY Chan 113 N44°58.78' W97°08.51' 311° 24.5 NM to fld. 1762/9E.
 HIWAS.

WENTWORTH N44°00.80' W97°05.31' NOTAM FILE HON.

NDB (MHW) 400 MDS at Madison Muni. NDB unmonitored.

OMAHA
 L-12H

WESSINGTON SPRINGS (4X4) 2 E UTC-6(-5DT) N44°03.66' W98°31.85'

OMAHA
 L-12H

1546 B NOTAM FILE HON

RWY 12-30: H3600X60 (ASPH) LIRL

RWY 12: P-line.

AIRPORT REMARKS: Unattended. ACTIVATE LIRL Rwy 12-30 and rotating bcn—CTAF.

WEATHER DATA SOURCES: AWOS-3 122.9 (617) 262-3825.

COMMUNICATIONS: CTAF 122.9

RADIO AIDS TO NAVIGATION: NOTAM FILE HON.

HURON (L) VORTAC 117.6 HON Chan 123 N44°26.40' W98°18.66' 193° 24.6 NM to fld. 1300/10E.

WHITE RIVER MUNI (7Q7) 1 S UTC-7(-6DT) N43°33.70' W100°44.51'

TWIN CITIES

2151 B NOTAM FILE HON

RWY 12-30: 3000X150 (TURF) LIRL

RWY 12: Pole.

AIRPORT REMARKS: Unattended. Wildlife on and invof arpt. Telephone avbl. ACTIVATE LIRL Rwy 12-30—CTAF.

COMMUNICATIONS: CTAF 122.8

WILDER (See DESMET)

WINNER RGNL (ICR) 1 NE UTC-6(-5DT) N43°23.42' W99°50.53'

OMAHA

2033 B S4 FUEL 100LL, JET A NOTAM FILE ICR

L-12H

RWY 13-31: H4500X75 (CONC) S-12.5 MIRL

IAP

RWY 13: PAPI(P2L)—GA 3.0° TCH 38'.

RWY 31: PAPI(P2L)—GA 3.0° TCH 35'.

RWY 03-21: 2881X150 (TURF)

RWY 21: Fence.

AIRPORT REMARKS: Attended continuously.

Deer on and invof arpt. Rwy 03-21 CLOSED winter months. High air tfc Oct-Nov. MIRL Rwy 13-31 opr dusk-0600Z after 0600Z activate—CTAF.

WEATHER DATA SOURCES: ASOS 126.775 (605) 842-3989.

COMMUNICATIONS: CTAF/UNICOM 122.8

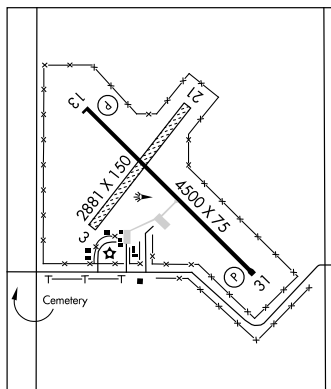
WINNER RCO 122.1R 112.8T (HURON RADIO)

RADIO AIDS TO NAVIGATION: NOTAM FILE PIR.

PIERRE (L) VORTACW 112.5 PIR Chan 72 N44°23.67'

W100°09.77' 156° 61.8 NM to fld. 1789/11E. HIWAS.

(L) VOR 112.8 ISD N43°29.28' W99°45.68' 203° 6.8 NM to fld. NOTAM FILE ICR.



YANKTON N42°55.10' W97°23.10' NOTAM FILE YKN.

OMAHA

(L) VORW/DME 111.4 YKN Chan 51 at Chan Gurney Muni. 1301/7E.

L-12H

VOR unusable byd 30 NM blo 3200'.

DME unusable 230°-270° byd 25 NM blo 4000', 271°-310° byd 30 NM blo 4000', 311°-060° byd 30 NM blo 3500'.

RCD 122.55 (HURON RADIO)

YANKTON

CHAN GURNEY MUNI (YKN) 3 N UTC-6(-5DT) N42°55.00' W97°23.16'

OMAHA

1306 B S4 FUEL 100LL, JET A NOTAM FILE YKN

H-5C, L-12H

RWY 13-31: H6095X100 (CONC) S-30, D-50, 2D-90 HIRL 0.6% up NW

IAP

RWY 13: REIL. VASI(V4L)—GA 3.0° TCH 40'. Trees.

RWY 31: MALSR. VASI(V4L)—GA 3.0° TCH 40'.

RWY 01-19: H3380X75 (ASPH) S-12.5 MIRL

RWY 01: PAPI(P2L)—GA 3.0° TCH 25'. P-line.

RWY 19: PAPI(P2L)—GA 3.0° TCH 25'. Fence.

AIRPORT REMARKS: Attended 1400-0000Z. For svc after 0000Z call 605-665-3473. PAEW mowing seasonal. Migratory waterfowl on and invof arpt. HIRL Rwy 13-31 preset medium ints SS-SR, MIRL Rwy 01-19 preset low ints SS-2300 to increase ints and ACTIVATE MALSR Rwy 31, PAPI Rwy 01 and Rwy 19 and Twy lgts—CTAF.

WEATHER DATA SOURCES: AWOS-3 111.4 YKN (605) 665-6072.

COMMUNICATIONS: CTAF/UNICOM 122.8

YANKTON RCD 122.55 (HURON RADIO)

MINNEAPOLIS CENTER APP/DEP CON 124.1

AIRSPACE: CLASS E svc continuous.

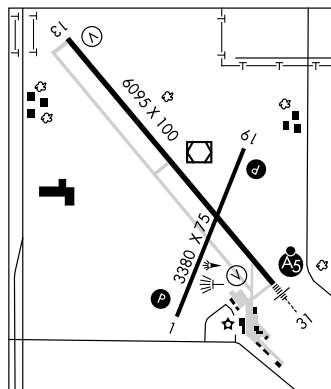
RADIO AIDS TO NAVIGATION: NOTAM FILE YKN.

YANKTON (L) VORW/DME 111.4 YKN Chan 51 N42°55.10'

W97°23.10' at fld. 1301/7E. AWOS-3.

CAGUR NDB (LOM) 347 YK N42°50.62' W97°18.13' 313° 5.7 NM to fld. Unmonitored.

ILS 109.5 I-YKN Rwy 31. Class IE. LOM CAGUR NDB. ILS unmonitored.



2010 U.S. & CANADIAN MILITARY AERIAL AIRCRAFT/PARACHUTE DEMONSTRATIONS

During calendar year 2010, the U.S. and Canadian Military Aerial Demonstration Teams (Thunderbirds, Blue Angels, Snowbirds, and Golden Knights) will be performing on the dates and locations listed below.

Pilots should expect Temporary Flight Restrictions (TFR) in accordance with 14 CFR Section 91.145, Management of aircraft operations in the vicinity of aerial demonstrations and major sporting events. The dimensions and effective times of the TFRs may vary based upon the specific aerial demonstration event and will be issued via the U.S. NOTAM system. Pilots are strongly encouraged to check FDC NOTAMs to verify they have the most current information regarding these airspace restrictions.

The currently scheduled 2010 aerial demonstration locations, subject to change without notice, are:

| DATE: | USAF Thunderbirds | USN Blue Angels | USA Golden Knights | Canadian Snowbirds |
|-----------------|---------------------|-----------------------|-----------------------|--------------------|
| September 25-26 | McConnell AFB, KS | MCAS Kaneohe Bay, HI | | Chico, CA |
| October 1-3 | | MCAS Miramar, CA | | MCAS Miramar, CA |
| 2-3 | Salinas, CA | | MCAS Miramar, CA | |
| 2-3 | | | Jackson, MS | |
| 9-10 | Little Rock AFB, AR | San Francisco, CA | Little Rock, AFB, AR | Daytona Beach, FL |
| 16-17 | El Paso, TX | Dobbins AFB, GA | El Paso, TX | Atlanta, GA |
| 23-24 | Houston, TX | NAS Jacksonville, FL | Washington, DC | |
| 30-31 | Cocoa Beach, FL | Ft Worth Alliance, TX | Ft Worth Alliance, TX | |
| November 6-7 | Lackland AFB, TX | Homestead ARB, FL | Lackland AFB, TX | |
| 6-7 | | | Homestead ARB, FL | |
| 11-14 | | | Ft Bragg, NC | |
| 12-13 | | NAS Pensacola, FL | | |
| 13-14 | Nellis AFB, NV | | | |

Note: Dates and locations are scheduled "show dates" only and do not reflect arrival or practice date TFR periods that may precede the specific aerial demonstration events listed above. Again, pilots are strongly encouraged to check FDC NOTAMs to verify they have the most current information regarding any airspace restrictions.

The Eastern Iowa Airport Temporary Rwy 08-26

Starting June 3, 2010, The Eastern Iowa Airport will close Rwy 09-27 for reconstruction. The airport will commission the existing parallel Twy A into temporary Rwy 08-26. Use of Rwy 08-26 will relocate aircraft operations 500 feet north, toward the airport terminal and facilities operations area. The following are general construction phases:

June 3, 2010, Rwy 08-26 opens; Rwy 09-27 closed for construction; first 1,000' of rwy end 27 converted to twy.

On or about July 5, 2010, Rwy 13-31 closed for construction of Rwy 13-31 and Rwy 09-27 intersection; Rwy 08-26 will remain open.

On or about July 30, 2010, Rwy 13-31 reopens; Rwy 09-27 remains closed for continued construction; Rwy 08-26 will remain open.

On or about September 23, 2010, Rwy 09-27 reopens; Rwy 08-26 closed for conversion to Twy A, Rwy 13-31 will remain open.

More information can be found on The Eastern Iowa website at <http://www.craairport.org>.

SEARCH LIGHT SHOW

Rosebud Casino, Valentine, Nebraska

Searchlight Activity will be conducted in an area within a 1 NM radius of 42 59 56N/100 34 29W (ANW315/36.5), 1500 AGL and above, from 1900 to 0200 local hours nightly. Searchlight beams may be injurious to pilots/passengers eyes at 1500 AGL and above. Flash blindness or cockpit illumination may occur at greater distances, up to several miles from the source. Huron AFSS, 866-732-1331, is the FAA coordination facility.

SPECIAL NORTH ATLANTIC, CARIBBEAN AND PACIFIC AREA COMMUNICATIONS

VHF air-to-air frequencies enable aircraft engaged in flights over remote and oceanic areas out of range of VHF ground stations to exchange necessary operational information and to facilitate the resolution of operational problems.

Frequencies have been designated as follows:

| | |
|----------------------|------------|
| North Atlantic area: | 123.45 MHz |
| Caribbean area: | 123.45 MHz |
| Pacific area: | 123.45 MHz |

MILITARY TRAINING ROUTES

The DOD Flight Information Publication AP/1B provides textual and graphic descriptions and operating instructions for all military training routes (IR, VR, SR) and refueling tracks/anchors. Complete and more comprehensive information relative to policy and procedures for IRs and VRs is published in FAA Handbook 7610.4 (Special Military Operations) which is agreed to by the DOD and therefore directive for all military flight operations. The AP/1B is the official source of route data for military users.

AEROBATIC PRACTICE AREA

FORT SCOTT MUNICIPAL AIRPORT (FSK), FORT SCOTT, KS

Aerobatic practice will be conducted within 1 NM radius of Fort Scott Municipal Airport (FSK), SFC to 5,000 feet AGL. The practice area is for waiver holders only. Pilots should use caution when operating in this area. For further information contact Flight Services at 1-800-WX-BRIEF (992-7433).

HAROLD KRIER FIELD (K58), ASHLAND, KS

Aerobatic practice will be conducted within 2 NM radius of Harold Krier Field (K58), SFC to 3,500 feet AGL. The practice area is for waiver holders only. Pilots should use caution when operating in this area. For further information contact Flight Services at 1-800-WX-BRIEF (992-7433).

WAMEGO MUNICIPAL AIRPORT (69K), MANHATTAN, KS

Aerobatic practice will be conducted within 1 NM radius of Wamego Municipal Airport (69K) SFC to 4,500 feet MSL, SR-SS. For further information contact Flight Services at 1-800-WX-BRIEF (992-7433).

GRANITE FALLS MUNI/LENZEN-ROE, AIRPORT, (GDB) GRANITE FALLS, MN

Aerobatic practice will be conducted within 2 NM radius of MVE160012, SFC to 6,000 feet MSL, SR-SS. For further information contact Flight Services at 1-800-WX-BRIEF (992-7433).

WASECA MUNICIPAL AIRPORT (ACQ), WASECA, MN

Aerobatic practice will be conducted within 1 NM radius of Waseca Municipal Airport (ACQ), 500 feet AGL to 4,000 feet MSL. The practice area is for registered users only. Pilots should use caution when operating in this area. For further information contact Flight Services at 1-800-WX-BRIEF (992-7433).

SEWARD COUNTY AIRPORT (SWT), SEWARD, NE

Aerobatic practice will be conducted within 1 NM radius of Seward County Airport (SWT), SFC to 7,000 feet MSL. The practice area is for waiver holders only. Pilots should use caution when operating in this area. For further information contact Flight Services at 1-800-WX-BRIEF (992-7433).

PIERRE REGIONAL AIRPORT (PIR), PIERRE, SD

Aerobatic practice will be conducted within 2 NM radius of Pierre Regional Airport (PIR, SFC to 3,300 feet MSL. The practice area is for waiver holders only. Pilots should use caution when operating in this area. For further information contact Flight Services at 1-800-WX-BRIEF (992-7433).

SKIE-LINCOLN AIRPORT (Y14), TEA, SD

Aerobatic practice will be conducted within 1 NM radius of Skie-Lincoln County Airport (Y14), SFC to 5,000 feet MSL. The practice area is for waiver holders only. Pilots should use caution when operating in this area. For further information contact Flight Services at 1-800-WX-BRIEF (992-7433).

MODEL ROCKET ACTIVITY

ANTHONY, KS

Model Rocket activity will be conducted within a 5 NM radius of ANY081021, SFC to 34,500 feet AGL, SR-SS. For further information contact Flight Services at 1-800-WX-BRIEF (992-7433).

ELLINWOOD, KS

Model Rocket activity will be conducted within a 3 NM radius of the Ellinwood Airport (1K6), with an alternate site of 2 NM Northwest of Ellinwood Airport (1K6), SFC to 10,000 feet AGL, SR-SS. For further information contact Flight Services at 1-800-WX-BRIEF (992-7433).

PITTSBURG, KS

Model Rocket activity will be conducted within a 3 NM radius of OSW045034, SFC to 18,000 feet MSL, SR-SS. For further information, contact Flight Services at 1-800-WX-BRIEF (992-7433).

HALLSVILLE, MO

Model Rocket activity will be conducted within a 2 NM radius of HLV299010, SFC to 6,000 feet AGL, SR-SS. For further information contact Flight Services at 1-800-WX-BRIEF (992-7433).

CIVIL USE OF MILITARY FIELDS:

U.S. Army, Air Force, Navy and Coast Guard Fields are open to civil fliers only in emergency or with prior permission.

Army installations, prior permission is required from the Commanding Officer of the installation.

For Air Force installations, prior permission should be requested at least 30 days prior to first intended landing from either Headquarters USAF (PRPOC) or the Commander of the installation concerned (who has authority to approve landing rights for certain categories of civil aircraft). For use of more than one Air Force installation, requests should be forwarded direct to Hq USAF (PRPOC), Washington, D.C. 20330.

Use of USAF installations must be specifically justified.

For Navy and Marine Corps installations, prior permission should be requested at least 30 days prior to first intended landing. An Aviation Facility License must be approved and executed by the Navy prior to any landing by civil aircraft.

Forms and further information may be obtained from the nearest U.S. Navy or Marine Corps aviation activity.

For Coast Guard fields prior permission should be requested from the Commandant, U.S. Coast Guard via the Commanding Officer of the field.

When instrument approaches are conducted by civil aircraft at military airports, they shall be conducted in accordance with the procedures and minimums approved by the military agency having jurisdiction over the airport.

AIRCRAFT LANDING RESTRICTIONS

Landing of aircraft at locations other than public use airports may be a violation of Federal or local law. All land and water areas are owned or controlled by private individuals or organizations, states, cities, local governments, or U.S. Government agencies. Except in emergency, prior permission should be obtained before landing at any location that is not a designated public use airport or seaplane base.

Landing of aircraft is prohibited on lands or waters administered by the National Park Service, U.S. Fish and Wildlife Service, U.S. Forest Service, and on many areas controlled by the U.S. Army Corps of Engineers, unless prior authorization is obtained from the respective agency.

CONTROLLED FIRING
Parsons, Kansas
(Until Further Notice)

Controlled Firing Area 1 NM radius 37°17'39"N/95°08'46"W, SFC-3200 MSL, Eff weekdays 0630-1700 LCL

INTERSECTION DEPARTURES DURING PERIOD OF DARKNESS
MINNEAPOLIS-ST PAUL INTERNATIONAL/WOLD-CHAMBERLAIN AIRPORT (MSP)
MINNEAPOLIS, MINNESOTA

Minneapolis International Airport Traffic Control Tower has been granted a waiver to the guideline that prohibits the control tower from taxiing an aircraft into "position and hold" at an intersection, between sunset and sunrise.

This waiver allows the tower to taxi the aircraft into "position and hold" during period of darkness, at the intersections listed below.

Runway 4 at Taxiways "S", "C2", "C3", "M2", or "M3"

Aircraft shall not taxi into position and hold under the provisions of this waiver when the subject intersection is not visible from the tower. When the provisions of this waiver are being exercised, the affected runway shall be used for departures only. Intersection departures will continue to be utilized at other locations between sunset and sunrise. However, aircraft cannot be taxied into "position and hold" prior to takeoff clearance.

LAMBERT-ST LOUIS INTERNATIONAL (STL), MISSOURI

STL Precision Runway Monitor Electronic Scan Radar System (PRM) commissioned. Full utilization of PRM is pending the future implementation of simultaneous instrument approaches. Until then no operational impact will result from the commissioning of PRM.

SIMULTANEOUS OFFSET INSTRUMENT APPROACH (SOIA) PROCEDURE FOR PILOTS
FILING FLIGHT PLANS TO LAMBERT-ST LOUIS INTERNATIONAL AIRPORT (STL)

Effective Thursday, October 27, 2005. During the hours of 0700-2200 local, STL ATC may utilize LDA PRM and ILS PRM approaches as weather and traffic demand dictate. Aircraft arriving from the northeast and northwest (primarily over PETTI and LORLE intersections) should expect ILS PRM Runway 30R. Aircraft arriving from the west and southeast (primarily over FTZ and QBALL) should expect LDA PRM Runway 30L. If unable to participate in PRM apchs acft operators are required to contact FAA ATCSCC directly at 1-800-333-4286 or 703-904-4452 prior to departure to obtain a precoordinated arrival time. Non-participating acft may encounter delays. Pilot requirements and procedures are outlined in U.S. Terminal Procedures Publications available on pages entitled "ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)" or "ATTENTION ALL USERS OF LDA PRECISION RUNWAY MONITOR (PRM)". This notice is effective until further notice.

CONTINUOUS POWER FACILITIES

In order to insure that a basic ATC system remains in operation despite an areawide or catastrophic commercial power failure, key equipment and certain airports have been designated to provide a network of facilities whose operational capability can be utilized independent of any commercial power supply.

In addition to those facilities comprising the basic ATC system, the following approach and lighting aids have been included in this program for a selected runway.

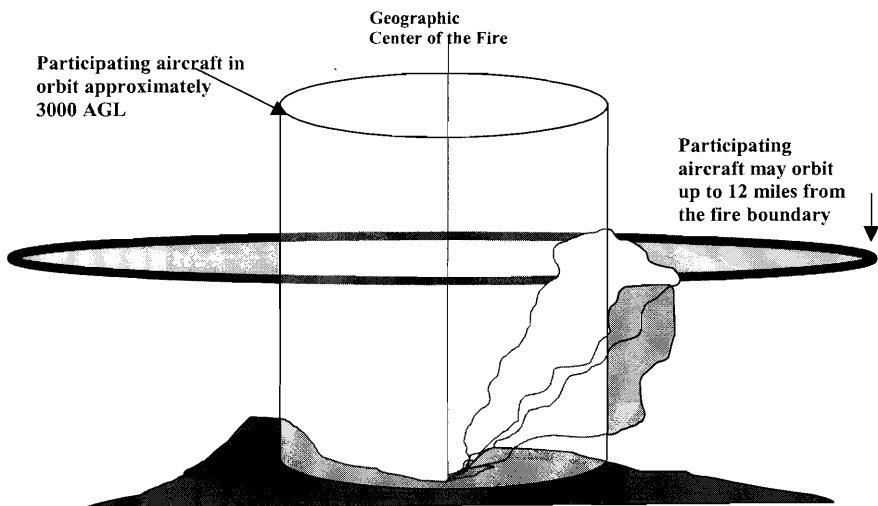
1. ILS (Localizer, Glide Slope, COMLO, Inner, Middle and Outer Markers)
2. Wind Measuring Capability
3. Approach Light System (ALS) or Short ALS (SALS)
4. Ceiling Measuring Capability
5. Touchdown Zone Lighting (TDZL)
6. Centerline Lighting (CL)
7. Runway Visual Range (RVR)
8. High Intensity Runway Lighting (HIRL)
9. Taxiway Lighting
10. Apron Light (Perimeter Only)

The following have been designated "Continuous Power Airports," and have independent back up capability for the equipment installed.

| Airport/Ident | Runway No. | Airport/Ident | Runway No. |
|-----------------------------------|------------|--------------------------------|------------|
| Albuquerque, NM (ABQ) | 08 | Milwaukee, WI (MKE) | 01L |
| Anchorage, AK (ANC) | 07R | Minneapolis, MN (MSP) | 30L |
| Andrews AFB, MD (ADW) | 01L | Nashville, TN (BNA) | 02L |
| Atlanta, GA (ATL) | 09R | New Orleans, LA (MSY) | 10 |
| Baltimore, MD (BWI) | 10 | New York, NY (JFK) | 04R |
| Bismarck, ND (BIS) | 31 | New York, NY (LGA) | 22 |
| Boise, ID (BOI) | 10R | Newark, NJ (EWR) | 04R |
| Boston, MA (BOS) | 04R | Oklahoma City, OK (OKC) | 35R |
| Charlotte, NC (CLT) | 36L | Omaha, NE (OMA) | 14R |
| Chicago, IL (ORD) | 10 | Ontario, CA (ONT) | 26L |
| Cincinnati, OH (CVG) | 36C | Philadelphia, PA (PHL) | 09R |
| Cleveland, OH (CLE) | 06R | Phoenix, AZ (PHX) | 08 |
| Dallas/Fort Worth, TX (DFW) | 17C | Pittsburgh, PA (PIT) | 10L |
| Denver, CO (DEN) | 35R | Reno, NV (RNO) | 16R |
| Des Moines, IA (DSM) | 31 | Salt Lake City, UT (SLC) | 34L |
| Detroit, MI (DTW) | 03R | San Antonio, TX (SAT) | 12R |
| El Paso, TX (ELP) | 22 | San Diego, CA (SAN) | 09 |
| Fairbanks, AK (FAI) | 01L | San Francisco, CA (SFO) | 28R |
| Great Falls, MT (GTF) | 03 | San Juan, PR (SJU) | 08 |
| Honolulu, HI (HNL) | 08L | Seattle, WA (SEA) | 16C |
| Houston, TX (IAH) | 26L | St. Louis, MO (STL) | 30R |
| Indianapolis, IN (IND) | 05L | Tampa, FL (TPA) | 36L |
| Jacksonville, FL (JAX) | 07 | Tulsa, OK (TUL) | 36R |
| Kansas City, MO (MCI) | 19R | Washington, DC (DCA) | 01 |
| Los Angeles, CA (LAX) | 24R | Washington, DC (IAD) | 01R |
| Memphis, TN (MEM) | 36L | Wichita, KS (ICT) | 01L |
| Miami, FL (MIA) | 08R | | |

NOTE—The existing CPA runway is listed. Pending and future changes at some locations will require a revised runway designation.

FIREFIGHTING TRAFFIC AREAS



Pilots are advised to stay clear of Firefighting Traffic Areas. Remain 15 miles from the area of activity. If you must over-fly the area, do so at an altitude of 5000 feet AGL above. However, to remain safe and out of the way of working aircraft, it is best to circumnavigate the area.

The wild-land fire environment can be very complex and involve a large number and variety of aircraft types including fixed and rotary wing aircraft. Some of the aircraft are small single and multi-engine command and control platforms that can be especially difficult to see and may give the appearance that the fire is not staffed. The aircraft participating in firefighting can orbit as far out as 12 miles from the perimeter of the fire. Any intrusion by aircraft not directly involved in the firefighting operation could delay the delivery of much needed retardant or water to ground firefighters and will adversely affect the safety of participating aircraft. Please stay well away from wild-land fires even if you feel that aircraft are not working the fire; they may be en route or unseen.

If you see a fire developing along your route, report it immediately to air traffic control who will advise the US Forest Service. The firefighting community would welcome this information.

The following narratives summarize the FAR Part 93 Special Air Traffic Rules, and Airport Traffic Patterns in effect as prescribed in the rule. This information is advisory in nature and in no way relieves the pilot from compliance with the specific rules set forth in FAR Parts 91 and 93.

Special Airport Traffic Areas prescribed in Part 93 are depicted on Sectional Aeronautical Charts, World Aeronautical Charts, Enroute Low Altitude Charts, and where applicable, on VFR Terminal Area Charts.

OPERATIONS RESERVATIONS FOR HIGH DENSITY TRAFFIC AIRPORTS KENNEDY, LAGUARDIA, AND WASHINGTON REAGAN NATIONAL

The Federal Aviation Administration (FAA) has designated New York's Kennedy and LaGuardia Airports and Washington Reagan National Airport as High Density Traffic Airports (HDTA), Title 14, Code of Federal Regulations, part 93, subpart K, and has prescribed air traffic rules and requirements for operating aircraft (excluding helicopters) to and from those airports during certain hours.

Reservations are required for operations from 6 a.m. through 11:59 p.m. local time at LaGuardia Airport and Washington Reagan National Airport. Reservations at Kennedy Airport are required from 3 p.m. through 7:59 p.m. local time.

Reservation procedures are detailed in Advisory Circular 93-1, Reservations for Unscheduled Operations at High Density Traffic Airports. A copy of the advisory circular is available on the FAA website at <http://www.faa.gov>. Reservations for unscheduled operations are allocated through the Enhanced Computer Voice Reservation System (e-CVRS) accessible via telephone or the Internet. This system may not be used to make reservations for scheduled air carrier or commuter flights.

The toll-free telephone number for accessing e-CVRS is 1-800-875-9694 and is available for calls originating within the United States, Canada, and the Caribbean. Users outside the toll-free areas may access e-CVRS by calling the toll number of 703-707-0568. The Internet web address for accessing the e-CVRS is <http://www.fly.faa.gov/ecvrs>. If you have any questions about reservation requirements or are experiencing problems with the system, you may telephone the Airport Reservation Office at the Air Traffic Control System Command Center at (703) 904-4452.

Requests for instrument flight rules (IFR) reservations will be accepted beginning 72 hours prior to the proposed time of operation at the high-density airport. For example, a request for an 11 a.m. reservation on a Thursday will be accepted beginning at 11 a.m. on the previous Monday.

IFR reservations must be obtained prior to IFR landing or takeoff at an HDTA during slot controlled hours. An air traffic control (ATC) clearance does not constitute a reservation. A reservation does not constitute permission to operate at an HDTA if additional operational limits or procedures are required by NOTAM and/or regulation.

Aircraft involved in medical emergencies will be handled by ATC without regard to a reservation after obtaining prior approval of the ATC System Command Center on (703) 904-4452. ATC will accommodate declared other emergency situations without regard to slot reservations.

NOTE: Visual flight rule (VFR) reservations via ATC for unscheduled operations at LaGuardia are not authorized from 7 a.m. through 8:59 a.m. local time and 4 p.m. through 6:59 p.m. local time, Monday through Friday and Sunday evenings, unless otherwise announced by NOTAM. Both IFR and VFR operations during those time periods must obtain an advance reservation through e-CVRS.

FSS TELEPHONE NUMBERS

Flight Service Station (FSS) facilities provide flight planning and weather briefing services to pilots. FSS services in the contiguous United States, Hawaii and Puerto Rico, are provided by a network of large FSS facilities and a few select remote facilities some of which operate part-time. Because of the interconnectivity between the facilities, all FSS services including radio frequencies are available continuously using published data.

Telephone Information Briefing Service (TIBS) is a FSS service that provides continuous recordings of meteorological and/or aeronautical information. A touch-tone telephone is required to fully utilize this service.

Further information can be found in the Aeronautical Information Manual (AIM).

NATIONAL FSS TELEPHONE NUMBER

Pilot Weather Briefings 1-800-WX-BRIEF (1-800-992-7433)

OTHER FSS TELEPHONE NUMBERS (except in Alaska)

TIBS (see description above) 1-877-4TIBS-WX (1-877-484-2799)

Clearance Delivery Only 1-888-766-8267

Lifeguard Flights Only 1-877-LIF-GRD3 (1-877-543-4733)

Flights within DC SFRA & FRZ * 1-866-225-7410

* District of Columbia Special Flight Rules Area & Flight Restricted Zone

KEY to AERODROME FORECAST (TAF) and AVIATION ROUTINE WEATHER REPORT (METAR)

TAF KPIT 091730Z 091818 15005KT 5SM HZ.FEW020 WS010/31022KT
FM1930 30015G25KT 3SM SHRA OVC015 TEMPO 2022 1/2SM +TSRA
OVC008CB
FM0100 27008KT 5SM SHRA BKN020 OVC040 PROB40 0407 1SM -RA BR
FM1015 18005KT 6SM -SHRA OVC020 BECMG 1315 P6SM NSW SKC

METAR KPIT 091955Z COR 22015G25KT 3/4SM R28L/2600FT TSRA OVC010CB
18/16 A2992 RMK SLP045 T01820159

| Forecast | Explanation | Report |
|----------------|--|--|
| TAF | Message type: <u>TAF</u> -routine or <u>TAF AMD</u> -amended forecast, <u>METAR</u> -hourly, <u>SPECI</u> -special or <u>TESTM</u> -non-commissioned ASOS report | METAR |
| KPIT | ICAO location indicator | KPIT |
| 091730Z | Issuance time: ALL times in UTC " <u>Z</u> ", 2-digit date, 4-digit time | 091955Z |
| 091818 | Valid period: 2-digit date, 2-digit beginning, 2-digit ending times In U.S. METAR : <u>COR</u> rected ob; or <u>AUTOM</u> ated ob for automated report with no human intervention; omitted when observer logs on | COR |
| 15005KT | Wind: 3 digit true-north direction, nearest 10 degrees (or <u>VariaBle</u>); next 2-3 digits for speed and unit, <u>KT</u> (KMH or MPS); as needed, <u>Gust</u> and maximum speed; 00000KT for calm; for METAR , if direction varies 60 degrees or more, <u>Variability</u> appended, e.g. 180 <u>V</u> 260 | 22015G25KT |
| 5SM | Prevailing visibility: in U.S., <u>Statute Miles</u> & fractions; above 6 miles in TAF <u>Plus6SM</u> . (Or, 4-digit minimum visibility in meters and as required, lowest value with direction) | 3/4SM |
| HZ | Runway Visual Range: <u>R</u> ; 2-digit runway designator <u>Left</u> , <u>Center</u> , or <u>Right</u> as needed; <u>"I"</u> ; <u>Minus</u> or <u>Plus</u> in U.S., 4-digit value, <u>FeeT</u> in U.S., (usually meters elsewhere); 4-digit value <u>Variability</u> 4-digit value (and tendency <u>Down</u> , <u>Up</u> or <u>No</u> change) | R28L/2600FT |
| FEW020 | Significant present, forecast and recent weather: see table (on back) Cloud amount, height and type: <u>SKY</u> <u>Clear</u> 0/8, <u>FEW</u> >0/8-2/8, <u>SCaT</u> tered 3/8-4/8, <u>BroKeN</u> 5/8-7/8, <u>OVeR</u> Cast 8/8; 3-digit height in hundreds of ft; <u>Towering CU</u> mulus or <u>CumulonimBus</u> in METAR ; in TAF , only <u>CB</u> . <u>Vertical</u> <u>Visibility</u> may be reported sky and height "VV004". More than 1 layer may be reported or forecast. In automated METAR reports only, <u>CLeaR</u> for "clear below 12,000 feet" Temperature: degrees Celsius; first 2 digits, temperature <u>"I"</u> last 2 digits, dew-point temperature; <u>Minus</u> for below zero, e.g., M06 Altimeter setting: indicator and 4 digits; in U.S., <u>A</u> -inches and hundredths; (<u>Q</u> -hectoPascals, e.g., Q1013) | TSRA OVC010CB 18/16 A2992 |

KEY to AERODROME FORECAST (TAF) and AVIATION ROUTINE WEATHER REPORT (METAR)

| Forecast | Explanation | Report |
|----------------------|---|---|
| WS010/31022KT | In U.S. TAF , non-convective low-level ($\leq 2,000$ ft) <u>Wind Shear</u> ; 3-digit height (hundreds of ft); <u>"/";</u> 3-digit wind direction and 2-3 digit wind speed above the indicated height, and unit, <u>KT</u> | RMK SLP045 T01820159 |
| FM1930 | In METAR , <u>ReMarK</u> indicator & remarks. For example: <u>Sea Level Pressure</u> in hectoPascals & tenths, as shown: 1004.5 hPa; <u>Temp/</u> dew-point in tenths °C, as shown: temp. 18.2°C, dew-point 15.9°C | |
| TEMPO 2022 | <u>From</u> and 2-digit hour and 2-digit minute beginning time: indicates significant change. Each FM starts on new line, indented 5 spaces. | |
| PROB40 0407 | <u>TEMPO</u> rary: changes expected for < 1 hour and in total, < half of 2-digit hour beginning and 2-digit hour ending time period | |
| BECMG 1315 | <u>PROB</u> ability and 2-digit percent (30 or 40): probable condition during 2-digit hour beginning and 2-digit hour ending time period | |
| | <u>BEC</u> oming: change expected during 2-digit hour beginning and 2-digit hour ending time period | |

Table of Significant Present, Forecast and Recent Weather - Grouped in categories and used in the order listed below; or as needed in TAF, No Significant Weather.

QUALIFIER

Intensity or Proximity

- Light "no sign" Moderate + Heavy

VC Vicinity: but not at aerodrome; in U.S. **METAR**, between 5 and 10SM of the point(s) of observation; in U.S. **TAF**, 5 to 10SM from center of runway complex (elsewhere within 8000m)

Descriptor

| | | | |
|------------|------------|-------------|-----------------|
| MI Shallow | BC Patches | PR Partial | TS Thunderstorm |
| BL Blowing | SH Showers | DR Drifting | FZ Freezing |

WEATHER PHENOMENA

Precipitation

| | | | |
|--|----------------|---------|----------------------------|
| DZ Drizzle | RA Rain | SN Snow | SG Snow grains |
| IC Ice crystals | PL Ice pellets | GR Hail | GS Small hail/snow pellets |
| UP Unknown precipitation in automated observations | | | |

Obscuration

| | | | |
|--------------------------|----------------------|----------|--------------------|
| BR Mist ($\geq 5/8$ SM) | FG Fog ($< 5/8$ SM) | FU Smoke | VA Volcanic ash |
| SA Sand | HZ Haze | PY Spray | DU Widespread dust |

Other

| | | | |
|-----------------|------------------------|--------------|------------------------------------|
| SQ Squall | SS Sandstorm | DS Duststorm | PO Well developed dust/sand whirls |
| FC Funnel cloud | +FC tornado/waterspout | | |

- Explanations in parentheses "() " indicate different worldwide practices.
- Ceiling is not specified; defined as the lowest broken or overcast layer, or the vertical visibility.
- NWS **TAFs** exclude turbulence, icing & temperature forecasts; NWS **METARs** exclude trend fcsts
- Although not used in US, Ceiling And Visibility OK replaces visibility, weather and clouds if: visibility ≥ 10 km; no cloud below 5000 ft (1500 m) or below the highest minimum sector altitude, whichever is greater and no CB; and no precipitation, TS, DS, SS, MIFG, DRDU, DRSA or DRSN.

UNITED STATES DEPARTMENT OF COMMERCE

NOAA/PA 96052

National Oceanic and Atmospheric Administration—National Weather Service

KEY AIR TRAFFIC FACILITIES**Air Traffic Control System Command Center**

Main Number.....703-904-4400

RGNL AIR TRAFFIC DIVISIONS

| REGION | TELEPHONE |
|--------------------|--------------|
| Alaskan | 907-271-5464 |
| Central | 816-329-2500 |
| Eastern | 718-553-4502 |
| Great Lakes | 847-294-7202 |
| New England | 781-238-7500 |
| Northwest Mountain | 425-227-2500 |
| Southern | 404-305-5500 |
| Southwest | 817-222-5500 |
| Western Pacific | 310-725-6500 |

AIR ROUTE TRAFFIC CONTROL CENTERS (ARTCCs)

| ARTCC NAME | *24 HR RGNL DUTY OFFICE TELEPHONE # | BUSINESS HOURS | BUSINESS TELEPHONE # |
|----------------|---|---------------------|-------------------------|
| Albuquerque | 817-222-5006 | 7:30 a.m.-4:00 p.m. | 505-856-4300 |
| Anchorage | 907-271-5936 | 7:30 a.m.-4:00 p.m. | 907-269-1137 |
| Atlanta | 404-305-5180 | 7:30 a.m.-5:00 p.m. | 770-210-7601 |
| Boston | 617-238-7001 | 7:30 a.m.-4:00 p.m. | 603-879-6633 |
| Chicago | 847-294-8400 | 8:00 a.m.-4:00 p.m. | 630-906-8221 |
| Cleveland | 847-294-8400 | 8:00 a.m.-4:00 p.m. | 440-774-0310 |
| Denver | 425-227-1389 | 7:30 a.m.-4:00 p.m. | 303-651-4100 |
| Ft. Worth | 817-222-5006 | 7:30 a.m.-4:00 p.m. | 817-858-7300 |
| Houston | 817-222-5006 | 7:30 a.m.-4:00 p.m. | 281-230-5300 |
| Indianapolis | 847-294-8400 | 8:00 a.m.-4:00 p.m. | 317-247-2231 |
| Jacksonville | 404-305-5180 | 8:00 a.m.-4:30 p.m. | 904-549-1501 |
| Kansas City | 816-329-3000 | 7:30 a.m.-4:00 p.m. | 913-254-8500 |
| Los Angeles | 661-265-8200 | 7:30 a.m.-4:00 p.m. | 661-265-8200 |
| Memphis | 404-305-5180 | 7:30 a.m.-4:00 p.m. | 901-368-8103 |
| Miami | 404-305-5180 | 7:00 a.m.-3:30 p.m. | 305-716-1500 |
| Minneapolis | 847-294-8400 | 8:00 a.m.-4:00 p.m. | 651-463-5580 |
| New York | 718-995-5426 | 8:00 a.m.-4:40 p.m. | 516-468-1001 |
| Oakland | 310-725-3300 | 6:30 a.m.-3:00 p.m. | 510-745-3331 |
| Salt Lake City | 425-227-1389 | 7:30 a.m.-4:00 p.m. | 801-320-2500 |
| Seattle | 425-227-1389 | 7:30 a.m.-4:00 p.m. | 253-351-3500 |
| Washington | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 703-771-3401 |

MAJOR TERMINAL RADAR APPROACH CONTROLS (TRACONS)

| TRACON NAME | *24 HR RGNL DUTY OFFICE TELEPHONE # | BUSINESS HOURS | BUSINESS TELEPHONE # |
|------------------|---|---------------------|-------------------------|
| Atlanta | 404-305-5180 | 7:00 a.m.-3:30 p.m. | 404-669-1200 |
| Chicago | 847-294-8400 | 8:00 a.m.-4:00 p.m. | 847-608-5509 |
| Dallas/Ft. Worth | 817-222-5006 | 7:30 a.m.-4:00 p.m. | 972-615-2500 |
| Denver | 425-227-1389 | 7:30 a.m.-4:00 p.m. | 303-342-1500 |
| Houston | 817-222-5006 | 7:30 a.m.-4:00 p.m. | 281-230-8400 |
| New York | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 516-683-2901 |
| Northern CA | 310-725-3300 | 7:00 a.m.-3:30 p.m. | 916-366-4001 |
| Potomac | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 540-349-7500 |
| Southern CA | 310-725-3300 | 7:30 a.m.-4:00 p.m. | 858-537-5800 |

*Facilities can be contacted through the Rgnl Duty Officer during non-business hours.

KEY AIR TRAFFIC FACILITIES

DAILY NAS REPORTABLE AIRPORTS

| AIRPORT NAME | *24 HR RGNL DUTY OFFICE TELEPHONE # | BUSINESS HOURS | BUSINESS TELEPHONE # |
|--|---|---------------------|-------------------------|
| Albuquerque Intl Sunport, NM | 817-222-5006 | 8:00 a.m.-5:00 p.m. | 505-842-4366 |
| Andrews AFB, MD | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 301-735-2380 |
| Baltimore/Washington Intl Thurgood Marshall, MD | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 410-962-3555 |
| Boston Logan Intl, MA | 781-238-7001 | 7:30 a.m.-4:00 p.m. | 617-455-3100 |
| Bradley Intl, CT | 617-238-7001 | 7:30 a.m.-4:00 p.m. | 203-627-3428 |
| Burbank/Bob Hope, CA | 310-725-3300 | 7:00 a.m.-5:30 p.m. | 818-567-4806 |
| Charlotte Douglas Intl, NC | 404-305-5180 | 8:00 a.m.-4:30 p.m. | 704-344-6487 |
| Chicago Midway, IL | 847-294-8400 | 8:00 a.m.-4:00 p.m. | 773-884-3670 |
| Chicago O'Hare Intl, IL | 847-294-8400 | 8:00 a.m.-4:00 p.m. | 773-601-7600 |
| Cleveland Hopkins Intl, OH | 847-294-8400 | 8:00 a.m.-4:00 p.m. | 216-898-2020 |
| Covington/Cincinnati, OH | 708-294-7401 | 8:00 a.m.-4:30 p.m. | 606-767-1006 |
| Dallas/Ft. Worth Intl, TX | 817-222-5006 | 8:30 a.m.-5:00 p.m. | 972-615-2531 |
| Dayton Cox Intl, OH | 847-294-8400 | 7:30 a.m.-4:00 p.m. | 937-454-7300 |
| Denver Intl, CO | 425-227-1389 | 7:30 a.m.-4:00 p.m. | 303-342-1600 |
| Detroit Metro, MI | 847-294-8400 | 8:00 a.m.-4:00 p.m. | 734-955-5000 |
| Fairbanks Intl, AK | 907-271-5936 | 7:30 a.m.-4:00 p.m. | 907-474-0050 |
| Fort Lauderdale Intl, FL | 404-305-5180 | 7:00 a.m.-3:30 p.m. | 305-356-7932 |
| George Bush Intercontinental/Houston, TX | 817-222-5006 | 7:30 a.m.-4:00 p.m. | 713-230-8400 |
| Hartsfield-Jackson Atlanta Intl, GA | 404-305-5180 | 7:00 a.m.-3:30 p.m. | 404-669-1200 |
| Honolulu Intl, HI | 310-725-3300 | 7:30 a.m.-4:00 p.m. | 808-840-6100 |
| Houston Hobby, TX | 817-222-5006 | 8:00 a.m.-5:00 p.m. | 713-847-1400 |
| Indianapolis Intl, IN | 847-294-8400 | 8:00 a.m.-4:00 p.m. | 317-484-6600 |
| Kahului/Maui, HI | 310-725-3300 | 7:30 a.m.-4:00 p.m. | 808-877-0725 |
| Kansas City Intl, MO | 816-329-3000 | 7:30 a.m.-4:00 p.m. | 816-329-2700 |
| Las Vegas McCarran, NV | 310-725-3300 | 7:30 a.m.-4:00 p.m. | 702-262-5978 |
| Los Angeles Intl, CA | 310-725-3300 | 7:00 a.m.-3:30 p.m. | 310-342-4900 |
| Louis Armstrong New Orleans Intl, LA | 817-222-5006 | 7:00 a.m.-4:30 p.m. | 504-471-4300 |
| Memphis Intl, TN | 404-305-5180 | 7:30 a.m.-4:00 p.m. | 901-322-3350 |
| Miami Intl, FL | 404-305-5180 | 7:00 a.m.-4:00 p.m. | 305-869-5400 |
| Minneapolis/St. Paul, MN | 847-294-8400 | 8:00 a.m.-4:00p.m. | 612-713-4000 |
| Nashville Intl, TN | 404-305-5180 | 7:00 a.m.-3:30 p.m. | 615-781-5460 |
| New York Kennedy Intl, NY | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 718-656-0335 |
| New York La Guardia, NY | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 718-335-5461 |
| Newark Liberty Intl, NJ | 718-995-5426 | 7:30 a.m.-4:00 p.m. | 973-565-5000 |
| Norman Y. Mineta San Jose Intl, CA | 310-725-3300 | 7:30 a.m.-4:00 p.m. | 408-982-0750 |
| Ontario Intl, CA | 310-725-3300 | 7:30 a.m.-4:00 p.m. | 909-983-7518 |
| Orlando Intl, FL | 404-305-5180 | 7:30 a.m.-5:00 p.m. | 407-850-7000 |
| Philadelphia Intl, PA | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 215-492-4100 |
| Phoenix Sky Harbor Intl, AZ | 310-725-3300 | 7:30 a.m.-4:00 p.m. | 602-379-4226 |
| Pittsburgh Intl, PA | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 412-269-9237 |
| Portland Intl, OR | 425-227-1389 | 7:30 a.m.-4:00 p.m. | 503-493-7500 |
| Raleigh-Durham, NC | 404-305-5180 | 8:00 a.m.-4:30 p.m. | 919-840-5544 |
| Ronald Reagan Washington National, DC | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 703-413-1535 |
| Salt Lake City, UT | 425-227-1389 | 7:30 a.m.-4:00 p.m. | 801-325-9600 |
| San Antonio Intl, TX | 817-222-5006 | 8:00 a.m.-4:30 p.m. | 210-805-5507 |
| San Diego Lindbergh Intl, CA | 310-725-3300 | 8:00 a.m.-4:30 p.m. | 619-299-0677 |
| San Francisco Intl, CA | 310-725-3300 | 7:00 a.m.-3:30 p.m. | 650-876-2883 |
| San Juan Intl, PR | 404-305-5180 | 7:30 a.m.-5:00 p.m. | 809-253-8663 |
| Seattle-Tacoma Intl, WA | 425-227-1389 | 7:30 a.m.-4:00 p.m. | 206-768-2900 |
| St. Louis Lambert, MO | 816-329-3000 | 7:30 a.m.-4:00 p.m. | 314-890-1000 |
| Tampa Intl, FL | 404-305-5180 | 7:30 a.m.-4:00 p.m. | 813-371-7700 |
| Ted Stevens Anchorage Intl, AK | 907-271-5936 | 7:30 a.m.-4:00 p.m. | 907-271-2700 |
| Teterboro, NJ | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 201-288-1889 |
| Washington Dulles Intl, DC | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 571-323-6372 |
| West Palm Beach, FL | 404-305-5180 | 8:00 a.m.-4:30 p.m. | 561-683-1867 |
| Westchester Co, NY | 718-995-5426 | 8:00 a.m.-4:30 p.m. | 914-948-6520 |

*Facilities can be contacted through the Rgnl Duty Officer during non-business hours.

Air Route Traffic Control Center frequencies and their remoted transmitter sites are listed below for the coverage of this volume. Bold face type indicates high altitude frequencies, light face type indicates low altitude frequencies. To insure unrestricted IFR operations within the high altitude enroute sectors, the use of 720 channel communications equipment (25 kHz channel spacing) is required.

®CHICAGO CENTER
H-2-5-10, L-12-27-28-31, A-1
(KZAU)

Burlington – 135.6
 Cedar Rapids – 132.8
 Des Moines – 127.05
 Dubuque – 133.95 **127.775 125.225**
 Moline – **135.825** 118.75
 Ottumwa – 118.15
 Washington – **134.325 133.35 125.575**

®DENVER CENTER – 124.8
H-1-2-3-4-5-6, L-8-9-10-11-12-13-14-15
(KZDV)

Ainsworth – 132.7 127.95
 Cheyenne – 125.9
 Colby – **132.175 127.65**
 Crawford – **135.025** 127.95
 Goodland – 132.5
 Grand Island West – 132.7
 Hayes Center – **127.025**
 Hill City – 132.5
 North Platte – 132.7 **124.225**
 Ogallala – 132.7 **126.325**
 O'Neill – **135.025** 132.7
 Rapid City – 127.95
 Scottsbluff – 127.95
 Sterling – 118.475

®KANSAS CITY CENTER – 132.325
H-5-6, L-10-15-16-27, A-2
(KZKC)

Anthony – **133.2** 118.35
 Butler – 125.55
 Chanute – 132.9
 Chillicothe – 125.25
 Columbia – **134.5** 134.5 **119.475** 118.4
 Dodge City – **120.725**
 Edna – 128.6 **118.125**
 Emporia – **132.25** 127.725 **124.975** 120.2
 Farmington – **132.65 120.825** 127.475
 Garden City – **133.45** 125.2
 Hallsville – **126.975**
 Hutchinson – **134.3 132.825** 118.8
 Independence – **121.65**
 Kansas City – **127.125**
 Kirksville – **134.625 133.725** 132.6
 Liberal – **134.675** 134.0
 Manhattan – 127.35
 Maples – 128.35
 Richland – 128.35 **125.675** 124.1
 Russell – 124.4
 St. Charles – 125.9
 St. Joseph – 127.9
 St. Louis – **133.15** 128.35
 Salina – 134.9 **125.175**
 Springfield – **133.475** 127.5
 Topeka – **134.725 125.425** 123.8

®MEMPHIS CENTER
H-5-6-9, L-15-16-17-18-22-25-26
(KZME)

Malden – 134.65

® MINNEAPOLIS CENTER – 134.45 125.5 120.3

H-2-5-10-11, L-10-12-13-14-27-28-31

(KZMP)

Aberdeen – 120.6

Alexandria – **133.4** 126.1

Alpena – 125.475

Bemidji – 134.75

Bismark – 125.6 **125.6**

Brainerd – 118.05

Darwin – 125.5

Des Moines – **135.775 118.825** 125.65

Dickinson – 124.25

Duluth – **134.55** 134.55 127.9

Dupree – 126.8

Fairmont – 127.75

 Fargo – **127.35**

Farmington – 133.7

Ft. Dodge – 134.0

Grand Forks – **132.15**

Grand Island – 126.05

Green Bay – 125.55

Hastings – **135.1** 119.4Huron – **126.25**

International Falls – 120.9

Iron Mountain – 133.45 121.25

Jamestown – 126.8 **124.2**La Crosse – 128.6 **118.85**Lincoln – **119.525**

Mankato – 135.0

Marysville – **134.225** 126.4Mason City – **134.25** 127.3Minot – **127.6** 127.6 118.9

Mosinee – 124.4

Omaha – **132.725** 128.75 119.6O'Neill – 128.0 **124.875**

Oscoda – 125.475

Pierre – **128.425** 125.1

Princeton – 121.05

Redwood Falls – **133.075** 127.1 **119.875**

Rochester – 132.35

Roseau – 134.75

Sioux City – **119.725** 124.1

Sioux Falls – 132.05

Traverse City – 338.3

Watertown – 128.5

White Cloud – **132.55** 120.85

® SALT LAKE CITY CENTER

H-1-2-3, L-9-11-12-13-14

Watford City – **126.85** 126.85

(KZLC)

VHF frequencies available at Flight Service Stations and at their remote communication outlets (RCO's) are listed below for the coverage of this volume. Frequencies in bold type are available all altitudes but recommended for use FL180 and above. "T" indicates transmit only and "R" indicates receive only. RCO's available at NAVAID's are listed after the NAVAID name. RCO's not at NAVAID's are listed by name.

COLUMBIA AFSS

BUTLER VORTAC 115.9T 122.1R
 CHILLICOTHE RCO 122.25
 CLINTON RCO 122.4
 COLUMBIA RCO 119.3 122.2 122.65
 DOGWOOD VORTAC 109.4T 122.1R
 DOWNTOWN RCO **122.6**
 HALLSVILLE VORTAC 114.2T 122.1R
 JEFFERSON CITY RCO 122.25
 JOHNSON COUNTY RCO 122.15
 JOPLIN RCO 122.6
 KANSAS CITY VORTAC 113.25T 122.1R 122.65
 KIRKSVILLE VORTAC 114.6T 122.1R 122.2
 LEBANON RCO 122.5
 MACON VOR/DME 112.9T 122.1R
 MAPLES VORTAC 113.4T 122.1R
 NEOSHO VOR/DME 117.3 122.1R
 POINT LOOKOUT RCO 122.65
 ST JOSEPH VORTAC 115.5T 122.1R 122.3
 SEDALIA RCO 122.05
 SPRINGFIELD VORTAC 116.9T 122.1R **122.55**
 SUNSHINE RCO 122.15
 VICHY VOR/DME 117.7T 122.1R 122.35
 WEST PLAINS RCO 122.15

COLUMBUS AFSS

AINSWORTH RCO 122.4
 ALLIANCE RCO 122.3
 BEATRICE RCO 122.5
 CENTRAL NEBRASKA RCO 122.45
 CHADRON VOR/DME 113.4T 122.1R 122.5
 COLUMBUS RCO 122.2 122.4
 HASTINGS VOR/DME 108.8T 122.1R
 HAYES CENTER VORTAC 117.7T 122.1R
 KEARNEY RCO 122.55
 LEE BIRD RCO **122.5**
 LINCOLN RCO **122.65**
 MC COOK RCO **122.6**
 NORFOLK VOR/DME 109.6T 122.15
 OMAHA RCO **122.35**
 O'NEILL RCO 122.45
 PAWNEE CITY VORTAC 112.4T 122.1R
 SCOTTSBLUFF VORTAC 112.6T 122.1R **122.6**
 SIDNEY VORTAC 115.9T 122.1R **122.45**
 THEDFORD RCO 122.4
 WOLBACH VORTAC 114.8T 122.1R

FORT DODGE AFSS

BURLINGTON RCO 122.65
CEDAR RAPIDS RCO 122.55
CHARLES CITY RCO 122.4
DAVENPORT RCO 122.5
DENISON RCO 122.25
DES MOINES RCO 122.65
DUBUQUE RCO 122.05
FORT DODGE RCO 122.2 122.3
GRINNELL RCO **122.35**
IOWA CITY VORTAC 116.2T 122.1R 122.25
LAMONI VORTAC 116.7T 122.1R
MASON CITY RCO 122.6
NEWTON VOR/DME 112.5T 122.1R
OMAHA VORTAC 116.3T 122.1R
OTTUMWA RCO 122.4
SIOUX CITY VORTAC 116.5T 122.1R 122.45
SPENCER RCO 122.15
WATERLOO RCO 122.05
WAUKON VORTAC 116.6T 122.1R

GRAND FORKS AFSS

BISMARCK RCO 122.2
BOWMAN RCO 122.4
DEVILS LAKE RCO 122.3
DICKINSON RCO 122.2
FARGO RCO 122.425
GRAND FORKS RCO 122.2 **122.6**
GRAND FORKS VOR/DME 114.3T
HAZEN RCO 122.45
JAMESTOWN VOR/DME 114.5T 122.2 123.6
MINOT RCO 122.2
ROLLA RCO 122.65
WILLISTON RCO **123.6**

GREEN BAY AFSS 122.2 122.55

RED WING RCO 122.6

HURON AFSS

ABERDEEN VOR/DME 113.0T 122.1R 122.4
BROOKINGS RCO 122.65
BUFFALO RCO 122.15
DUPREE RCO 122.6
HURON VORTAC 117.6T 122.1R 122.2 122.6 123.6
MITCHELL RCO 122.3
MOBRIDGE RCO 122.35
PHILIP RCO 122.4
PIERRE RCO 122.2
RAPID CITY VORTAC 112.3T 122.1R 122.65
SIOUX FALLS RCO 122.2
SPEARFISH RCO 122.55
WATERTOWN RCO 122.5
WINNER VOR 112.8T 122.1R
YANKTON RCO 122.55

PRINCETON AFSS

ALBERT LEA RCO 122.05
 ALEXANDRIA RCO 122.6
 ANOKA COUNTY RCO 122.55
 AUSTIN RCO 122.5
 BAUDETTE RCO 122.4
 BEMIDJI RCO 123.6
 BRAINERD RCO 123.65
 CRANE LAKE RCO 122.2
 DARWIN VORTAC 109.0T 122.1R
 DETROIT LAKES RCO 122.5
 DULUTH RCO 122.35
 ELY VOR/DME 109.6T 122.1R
 EVELETH RCO 122.45
 FAIRMONT VOR/DME 110.2T 123.6R
 FARMINGTON VORTAC 115.7T 122.1R
 FERGUS FALLS RCO 122.35
 GRAND MARAIS RCO 122.3
 GRAND RAPIDS RCO 122.05
 HIBBING RCO 122.6
 HUMBOLDT VORTAC 112.4T 122.1R
 INTL FALLS RCO 123.6
 MADISON RCO 122.3
 MANKATO VOR/DME 110.8T 122.1R
 MARSHALL RCO 122.35
 MINNEAPOLIS RCO 122.3
 MONTEVIDEO RCO 122.45
 MORA RCO 122.4
 MORRIS RCO 122.25
 NODINE VORTAC 117.9T 122.1R
 OWATONNA RCO 122.25
 PARK RAPIDS VOR/DME 110.6T 122.1R
 PRINCETON RCO 122.2
 REDWOOD FALLS RCO 122.4
 THIEF RIVER FALLS VOR/DME 108.4T 122.1R 123.6R
 ROCHESTER RCO 122.45
 ROSEAU RCO 122.25
 ST CLOUD RCO 122.5
 WARROAD RCO 122.55
 WILLMAR RCO 122.15
 WINONA RCO 122.15
 WORTHINGTON VOR/DME 110.6T 122.1R 123.6R

SAINT LOUIS AFSS

BIBLE GROVE VORTAC 109.0T 122.05R
 CAPE GIRARDEAU VOR/DME 112.9T 122.1R **122.4**
 CAPITAL VORTAC 112.7T 122.1R 122.25
 CENTRALIA VORTAC 115.0T 122.1R
 CHAMPAIGN (URBANA) RCO 122.45
 DECATUR RCO 122.3
 FARMINGTON VORTAC 115.7T 122.1R 122.3
 FORISTELL VORTAC 110.8T 122.1R
 MALDEN VORTAC 111.2T 122.1R
 MARION VOR/DME 110.4T 122.1R
 MATTOON VOR/DME 109.4T 123.6R
 QUINCY VORTAC 113.6T 122.1R 122.5
 ST LOUIS VORTAC 117.4T 122.1R 122.2 122.6 122.45
 ST LOUIS RGNL RCO 122.45 122.6
 SAMSVILLE VOR/DME 116.6T 122.1R
 SPINNER RCO 122.25
 SPIRIT of ST LOUIS RCO 122.2 124.75
 VANDALIA VORTAC 114.3T 122.1R

WICHITA AFSS

ANTHONY VORTAC 112.9T 122.1R
CHANUTE RCO 122.35
DODGE CITY RCO 122.35
EMPORIA RCO 122.3
FT LEAVENWORTH RCO 122.35
GARDEN CITY RCO 122.45
GOODLAND RCO 122.4
GREAT BEND RCO 122.5
HAYS RCO 122.3
HILL CITY RCO **122.65**
HUTCHINSON RCO 122.05
LIBERAL RCO 122.4
MANHATTAN RCO **122.65**
MANKATO VORTAC 109.8T 122.1R
MC PHERSON RCO 122.15
OSWEGO VORTAC 117.6T 122.1R
PARSONS RCO 122.35
RUSSELL RCO 122.6
SALINA RCO 122.4
STROTHER RCO 122.5
TOPEKA RCO 122.45
ULYSSES RCO 122.3
WICHITA RCO 122.2 **122.65**

FLIGHT STANDARDS DISTRICT OFFICES (FSDO)

Below is a list of FSDO's in the area of coverage of this directory. These offices serve the aviation industry and the general public on matters relating to certification and operation of general aviation aircraft. Address letters to Manager, Flight Standards District Office—Federal Aviation Administration.

IOWA

Des Moines FSDO
3753 Convenience Blvd
Ankeny, IA 50021
Telephone: 515-289-3840

KANSAS

Wichita FSDO
1801 Airport Road
Wichita, KS 67209
Telephone: 316-941-1200

MINNESOTA

Minneapolis FSDO
6020 28TH Ave. South, Room 201
Minneapolis, MN 55450
Telephone: 612-713-4211

MISSOURI

Kansas City FSDO
901 Locust, Room 403
Kansas City, MO 64106
Telephone: 816-329-4000

St. Louis FSDO
10801 Pear Tree Lane
St. Ann, MO 63074
Telephone: 314-429-1006

NEBRASKA

Lincoln FSDO
3431 Aviation Rd, Suite 120
Lincoln, NE 68524
Telephone: 402-475-1738

NORTH DAKOTA

Fargo FSDO
4620 Amber Valley Pkwy
Fargo, ND 58104
Telephone: 701 277-1245

SOUTH DAKOTA

Rapid City FSDO
909 St. Joseph Street
Suite 700
Rapid City, SD 57701
Telephone: 605-737-3050

PREFERRED IFR ROUTES

A system of preferred routes has been established to guide pilots in planning their route of flight, to minimize route changes during the operational phase of flight, and to aid in the efficient orderly management of the air traffic using federal airways. The preferred IFR routes which follow are designed to serve the needs of airspace users and to provide for a systematic flow of air traffic in the major terminal and en route flight environments. Cooperation by all pilots in filing preferred routes will result in fewer traffic delays and will better provide for efficient departure, en route and arrival air traffic service.

The following lists contain preferred IFR routes for the low altitude stratum and the high altitude stratum. The high altitude list is in two sections; the first section showing terminal to terminal routes and the second section showing single direction route segments. Also, on some high altitude routes low altitude airways are included as transition routes.

The following will explain the terms/abbreviations used in the listing:

1. Preferred routes beginning/ending with an airway number indicate that the airway essentially overlies the airport and flights are normally cleared directly on the airway.
2. Preferred IFR routes beginning/ending with a fix indicate that aircraft may be routed to/from these fixes via a Standard Instrument Departure (SID) route, radar vectors (RV), or a Standard Terminal Arrival Route (STAR).
3. Preferred IFR routes for major terminals selected are listed alphabetically under the name of the departure airport. Where several airports are in proximity they are listed under the principal airport and categorized as a metropolitan area; e.g., New York Metro Area.
4. Preferred IFR routes used in one direction only for selected segments, irrespective of point of departure or destination, are listed numerically showing the segment fixes and the direction and times effective.
5. Where more than one route is listed the routes have equal priority for use.
6. Official location identifiers are used in the route description for VOR/VORTAC nav aids.
7. Intersection names are spelled out.
8. Navaid radial and distance fixes (e.g., ARD201113) have been used in the route description in an expediency and intersection names will be assigned as soon as routine processing can be accomplished. Navaid radial (no distance stated) may be used to describe a route to intercept a specified airway (e.g., MIV MIV101 V39); another navaid radial (e.g., UIM UIM255 GSW081); or an intersection (e.g., GSW081 FITCH).
9. Where two nav aids, an intersection and a navaid, a navaid and a navaid radial and distance point, or any navigable combination of these route descriptions follow in succession, the route is direct.
10. The effective times for the routes are in UTC. During periods of daylight saving time effective times will be one hour earlier than indicated. All states observe daylight saving time except Arizona, Puerto Rico and the Virgin Islands. Pilots planning flight between the terminals or route segments listed should file for the appropriate preferred IFR route.
11. (90–170 incl) altitude flight level assignment in hundred of feet.
12. The notations “pressurized” and “unpressurized” for certain low altitude preferred routes to Kennedy Airport indicate the preferred route based on aircraft performance.
13. High Altitude Preferred IFR Routes are in effect during the following time periods unless otherwise noted.
Sun 1300–2259 local time.
Mon thru Fri 0701–2259 local time.
Sat 0701–1459 local time.
14. Use current SIDs and STARs for flight planning.
15. For high altitude routes, the portion of the routes contained in brackets [] is suggested but optional. The portion of the route outside the brackets will likely be required by the facilities involved.

LOW ALTITUDE

| Terminals | Route | Effective Times (UTC) |
|-------------------------------|--|-----------------------|
| DES MOINES (DSM) | | |
| Memphis (MEM) | V175 MAW | 0000–2359 |
| KANSAS CITY METRO AREA | | |
| Chicago Midway (MDW) | PIA MOTIF–STAR | 0000–2359 |
| Chicago O’Hare (ORD) | EXCEL V116 PIA V262 BDF V10 PLANO | |
| Indianapolis (IND) | EXCEL V116 UIN V50 | 0000–2359 |
| Louisville (SDF) | ANX V12 COU V44 HODGS V175 VIH V178 FAM V190 PXV V4 | 0000–2359 |
| | or | |
| | ANX V159 AUGIE V234 VIH V178 FAM V190 PXV V4 | 0000–2359 |
| St. Louis (STL) | LAKES–DP COU TRAKE TRAKE–STAR | 0000–2359 |
| Terre Haute (HUF) | EXCEL V116 UIN V50 | 0000–2359 |
| MINNEAPOLIS METRO AREA | | |
| Chicago Midway (MDW) | V2 LNR V171 RFD V128 V8 JOT | 0000–2359 |
| Chicago O’Hare (ORD) | V2 V97 KRENA | 0000–2359 |
| ST. LOUIS METRO AREA | | |
| Chicago Midway (MDW) | CARDS–DP SPI V9 PNT V69 JOT | 0000–2359 |

| 370 | PREFERRED IFR ROUTES | |
|---|--|-----------------------|
| Terminals | Route | Effective Times (UTC) |
| Chicago O'Hare (ORD)..... | (at or blo 170) CARDS-DP SPI V9 PNT V227 PLANO | 0000-2359 |
| Cleveland (CLE)..... | (non-turbojets) TURBO-DP DEC VHP V14 MIE V210 ROD ZABER-STAR | |
| Columbus (CMH) | TOY V12 J134 GBEES CVG V5 JOGER | |
| Indianapolis (IND) | (Turbojets) GATWY-DP VHP | |
| | or (Non-turbojets) TURBO-DP DEC VHP | |
| Kansas City (MCI)..... | OZARK-DP MCM BQS-STAR | |
| WICHITA (ICT) | | |
| Indianapolis (IND) | V12 EMP V234 ENL V72 BIB V12 KELLY | 0000-2359 |
| Louisville (IIU)..... | V350 CNU V132 SGF V190 PXV V4 | 0000-2359 |
| Terre Haute (HUF)..... | V12 EMP V234 ENL V72 BIB | 0000-2359 |
| HIGH ALTITUDE | | |
| Terminals | Route | Effective Times (UTC) |
| KANSAS CITY (MCI) | | |
| Baltimore (BWI)..... | LAKES-DP COU STL J24 VHP ROD J152 J162 MGW EMI-STAR | 0000-2359 |
| Chicago O'Hare (ORD)..... | ROYAL-DP JTHRO IRK BENKY (RNAV)-STAR | |
| Cleveland Metro Area (CLE) (CGF) (BKL) (LNN) (LPR) | OBK CRL HIMEZ-STAR | |
| Dallas/Fort Worth (DFW) | RACER TUL UKW | |
| Detroit Metro-Wayne (DTW)..... | MKG POLAR-STAR..... | |
| Kennedy (JFK)..... | LAKES-DP COU STL J24 VHP ROD J29 JHW J70 LVZ LENDY-STAR | |
| La Guardia (LGA) | ROYAL-DP JTHRO IRK BDF JOT J146 ETG MIP-STAR | 1100-0400 |
| Milwaukee (MKE) | ROYAL-DP JTHRO IRK BDF JOT VEENA-STAR | |
| Newark (EWR)..... | ROYAL-DP JTHRO IRK BDF JOT J146 GIJ J554 CRL J584 SLT FQM-STAR | |
| Washington Dulles (IAD)..... | LAKES-DP COU STL J24 VHP J80 J30 BUCKO JASEN-STAR | |
| | or LAKES-DP COU STL J24 VHP J80 AIR MGW MGW 121 VERNI ESL ROYIL-STAR..... | |
| | or (GPS or DME/DME IRU equipped) or LAKES-DP COU STL J24 VHP J80 AIR MGW VERNI ESL SHNON (RNAV)-STAR | |
| Washington Natl (DCA)..... | LAKES-DP COU STL J24 VHP J80 J30 BUCKO BUCKO-STAR | |
| | or LAKES-DP COU STL J24 VHP J80 J30 SHAAR WZRRD-STAR | |
| | or LAKES-DP COU STL J24 VHP J80 J30 SHAAR ELDEE (RNAV)-STAR..... | |
| LINCOLN (LNK) | | |
| Chicago O'Hare (ORD)..... | FOD DBQ JVL-STAR | 0700-2359 |
| MINNEAPOLIS (MSP) | | |
| Atlanta (ATL)..... | ZMBRO-DP ODI J30 BRIBE BDF ENL ENL162 PLESS TINGS J45 BNA RMG-STAR | 1100-0400 |
| | or | |

| Terminals | Route | Effective Times (UTC) |
|---|--|-----------------------|
| | (RNAV only) ZMBRO-DP ODI J30 BRIBE ENL ENL162 PLESS TINGS J45 BNA ERLIN (RNAV)-STAR | 1100-0400 |
| Baltimore (BWI) | DLL J34 AIR J162 MGW EMI-STAR | |
| Chicago Midway (MDW) | DBQ CVA MOTIF-STAR | 1100-0400 |
| Chicago O'Hare (ORD) | RST JVL-STAR | 0000-2359 |
| Cleveland Metro Area (CLE) (CGF) (BKL) (LNN) (LPR) | COULT-DP DLL J34 GRR HIMEZ-STAR | |
| Dallas/Fort Worth (DFW) | J21 IRW UKW | |
| Denver (DEN) | FSD J114 SNY LANDR-STAR | |
| Detroit Metro Area (PTK), (YIP), (ARB) (DET), (CYQG) | DLL BAE MKG LAN SPRTN-STAR | |
| Fort Lauderdale (FLL) | ROCHESTER-DP ALO J233 J45 STL J45 BNA J73 SZW J43 PIE FORTL-STAR | |
| | or (DME/DME-IRU or GPS) MSP ROCHESTER-DP ALO J233 J45 STL J45 BNA J73 SZW JINGL (RNAV)-STAR | |
| Fort Myers (RSW) | (DME/DME-IRU or GPS) ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW TYNEE (RNAV)-STAR | 1100-0300 |
| Kansas City (MKC) | FOD RBA-STAR | |
| Kennedy (JFK) | DLL BAE J70 JHW J70 LVZ LENDY-STAR | 0000-2359 |
| La Guardia (LGA) | DLL BAE J34 J146 ETG MIP-STAR | |
| Madison (MSN) | ODI MSN | 0700-2359 |
| Marco Island (MKY) | (DME/DME-IRU or GPS) ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW PIKKR (RNAV)-STAR | |
| Memphis (MEM) | ALO J233 STL J35 FAM ARG GQE-STAR | |
| | or ALO IRK VIH ARG GQE-STAR | |
| Miami (MIA) | ROCHESTER-DP ALO J233 J45 STL J45 BNA J73 SZW J43 PIE CYY-STAR | |
| | or (/E, /G, /R, /J, /L, /Q) MSP ROCHESTER-DP ALO J233 J45 STL J45 BNA J73 SZW J43 PIE DEEDS (RNAV)-STAR | |
| Milwaukee (MKE) | ODI MSN V2 WAITS | 0700-2359 |
| Myrtle Beach (MYR) | EARND ELANR EMMLY ERECO IIU RYANS | |
| Naples (APF) | (GPS required) ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW PIKKR (RNAV)-STAR . | |
| Nashville (BNA) | ODI J30 BRIBE BDF ENL ENL162 PLESS J45 | 1100-0400 |
| Newark (EWR) | DLL BAE J34 CRL J584 SLT FQM-STAR | |
| Oakland (OAK) | ABR J32 MLD J158 MVA ECA | |
| Orlando (ORL) (MCO) | ODI J30 BRIBE BDF ENL ENL162 PLESS J45 ATL J89 OTK LEESE-STAR | 1100-0400 |
| | or (GPS or DME/DME-IRU equipped) ODI J30 BRIBE BDF ENL ENL162 PLESS J45 ATL J89 OTK PIGLT (RNAV)-STAR | 1100-0400 |
| Palm Beach (PBI) | (GPS or DME/DME-IRU equipped) ROCHESTER-DP ALO J233 J45 STL J45 BNA J73 SZW WLACE | |
| Philadelphia (PHL) | COULT-DP DLL BAE J34 CRL CXR EWC JST BUNTS-STAR | |
| Phoenix (PHX) | ONL LBF PUB ALS J102 ZUN FOSSL-STAR | |
| Pottstown (PTW) | COULT-DP DLL BAE J34 CRL CXR EWC JST | |
| St. Louis (STL) | RST ALO J233 CNOTA RIVRS-STAR | |
| Salt Lake City (SLC) | ABR J158 DDY J202 OCS OGD | |
| San Francisco (SFO) | ABR J32 FMG ILA PYE | |
| Sarasota/Bradenton (SRQ) | ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW CLAMP-STAR | 1100-0400 |
| Tampa (TPA) | ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW DARBS-STAR | 1100-0400 |

| Terminals | Route | Effective Times (UTC) |
|---|--|-----------------------|
| Washington Natl (DCA)..... | DLL J34 SHAAR WZRRD-STAR | |
| | or | |
| | DLL J34 SHAAR ELDEE (RNAV)-STAR | |
| Washington Dulles (IAD)..... | DLL J34 AIR MGW MGW121 VERNI ESL | |
| | ROYIL-STAR | |
| | or | |
| | (GPS or DME/DME-IRU equipped) DLL J34 AIR | |
| | MGW VERNI SHNON (RNAV)-STAR..... | |
| West Palm Beach (PBI) | (GPS or DME/DME-IRU equipped) | |
| | ROCHESTER-DP ALO J233 J45 STL J45 BNA | |
| | J73 SZW CTY GULLO (RNAV)-STAR..... | |
| | or | |
| | ROCHESTER-DP ALO J233 J45 STL J45 BNA J73 | |
| | SWZ CTY LLAKE-STAR | 1100-0400 |
| OMAHA (OMA) | | |
| Chicago O'Hare (ORD)..... | FOD DBQ JVL-STAR | 0700-2359 |
| ROCHESTER (RST) | | |
| Chicago O'Hare (ORD)..... | RST JVL-STAR | 0000-2359 |
| ST LOUIS (STL) | | |
| Baltimore (BWI)..... | GATWY-DP IIU J526 BKW J147 CSN | |
| | OTT-STAR | |
| Boca Raton (BCT)..... | (DME/DME/IRU OR GPS) PLESS-DP BNA J73 | |
| | SZW PRRIE (RNAV)-STAR | |
| Boston (BOS)..... | GATWY-DP ROD J29 JHW J82 ALB GDM | |
| | GDM-STAR | |
| Chicago Midway (MDW)..... | CARDS-DP SPI MOTIF-STAR | 1200-0400 |
| Chicago O'Hare (ORD)..... | CARDS-DP BDF BDF-STAR,.. | 0000-2359 |
| Cleveland Metro Area (CLE) (CGF) (BKL) | | |
| (LNN) (LPR) | GATWY-DP JIGSY J134 JUDDI CVG ZABER-STAR.. | |
| | or | |
| | (turbojets) GATWY-DP JIGSY J134 JUDDI CVG | |
| | ZABER-STAR | |
| Columbus (CMH) | GATWY-DP ROD V210 GUNNE | |
| Dallas/Fort Worth (DFW) | LINDY-DP MAP RZC FSM BYP | |
| Detroit Metro Area (PTK), (YIP), (ARB) | | |
| (DET), (CYQG) | GATWY-DP VHP FWA CRUX-STAR | |
| | GATWY-DP VHP FWA V96 VWV VWV051 POOFE.... | |
| Fort Lauderdale (FLL) | (all others) PLESS-DP BNA J73 SZW J43 PIE | |
| | FORTL-STAR..... | |
| | or | |
| | (DME/DME/IRU OR GPS) PLESS-DP BNA J73 | |
| | SZW JINGL (RNAV)-STAR..... | |
| Fort Myers (FMY) | (DME/DME/IRU OR GPS TURBOJET) | |
| | LINDBERGH-DP MAW VUZ J39 MGM J41 SZW | |
| | TYNEE (RNAV)-STAR..... | |
| Houston George Bush Intcntl (IAH) | (Turbojets-GPS or DME/DME-IRU equipped) | |
| | LINDY-DP LIT J180 SWB TXMEX (RNAV)-STAR .. | |
| | or | |
| | (non-advanced NAV only) LINDY-DP LIT J180 | |
| | SWB DAS-STAR | |
| Houston Hobby (HOU) | (GPS or DME/DME-IRU equipped) LINDY-DP LIT | |
| | J180 SWB ROKIT (RNAV)-STAR | |
| | or | |
| | (non-advanced NAV only) LINDY-DP LIT J180 | |
| | SWB DAS-STAR | |
| La Guardia (LGA) | GATWY-DP ROD J29 J146 ETG MIP-STAR | |
| Miami (MIA) | (all others) PLESS-DP BNA J73 SZW J43 PIE | |
| | CYY-STAR | |
| | or | |
| | (DME/DME/IRU OR GPS TURBOJET) PLESS-DP | |
| | BNA J73 SZW SSCOT (RNAV)-STAR | |
| Orlando Executive (ORL)..... | PLESS-DP BNA J73 SZW OTK LEESE-STAR | |
| | or | |
| | (GPS or DME/DME-IRU equipped) PLESS BNA | |
| | J73 SZW OTK PIGLT (RNAV)-STAR | 1100-0400 |

| Terminals | Route | Effective Times (UTC) |
|-------------------------------|--|-----------------------|
| Orlando Intl (MCO) | (GPS or DME/DME-IRU equipped) PLESS BNA J73 SZW OTK PIGLT (RNAV)-STAR | 1000-0400 |
| Tampa (TPA) | LINDY-DP MAW VUZ J41 SZW DARBS-STAR | 1100-0400 |
| Washington Dulles (IAD) | BLUES-DP IIU J526 BKW ROYIL-STAR | |
| | or | |
| Washington Natl (DCA) | BLUES-DP IIU J526 BKW SHNON (RNAV)-STAR ... GATWY-DP IIU J526 BKW WZRRD-STAR | |
| | or | |
| West Palm Beach (PBI) | GATWY-DP IIU J526 BKW ELDEE (RNAV)-STAR (DME/DME/IRU OR GPS) PLESS-DP BNA J73 SZW WLACE (RNAV)-STAR | |

SPECIAL HIGH ALTITUDE DIRECTIONAL ROUTES

| Terminals | Route | Effective Times (UTC) |
|--|---|-----------------------|
| Traffic overflying Kansas City VORTAC (MCI to IAD: MCI | J24 IIU J8 HVQ ROYIL-STAR | |
| | or | |
| | J24 IIU J8 HVQ SHNON (RNAV)-STAR | |
| Traffic overflying Lamoni VORTAC (LMN) to IAD: LMN | (GPS or DME/DME-IRU equipped) J64 FWA APE AIR MGW VERNI ESL ROYIL-STAR | |
| | or | |
| | (GPS or DME/DME-IRU equipped) J64 FWA APE AIR MGW VERNI ESL SHNON (RNAV)-STAR | |
| Traffic overflying Saint Louis VORTAC (STL) to IAD: STL | IIU J8 HVQ ROYIL-STAR | |
| | or | |
| | IIU J8 HVQ SHNON (RNAV)-STAR | |

Q ROUTES REGULATORY

Q1, Q3, Q5, Q7, Q9 and Q11 are preferred single direction (Southbound) Q routes; flight planning Northbound not authorized.

Q routes are RNAV routes that require the use of GNSS or DME/DME/IRU RNAV, unless otherwise indicated. Please note that this section does not apply to Q routes in the Gulf of Mexico. Gulf of Mexico Q routes are explained in the Southeast and South Central A/FD volumes. Q routes listed in this A/FD volume have at least part of one of their leg segments within this volume's area of coverage.

GNSS and DME/DME/IRU RNAV operations are authorized along Q routes at FL 180 and above. GNSS and DME/DME/IRU RNAV MEAs will only be published if above FL 180.

DME facilities that have been assessed for RNAV operations are listed below. Q routes with no DME facilities listed are limited to GNSS RNAV operations only. Those routes will have an enroute chart note "GNSS REQUIRED".

| Route | Segment | DME |
|------------|-------------------|--|
| Q1 | ELMAA-ERAVE | BTG, OLM, HQM, HUH, UBG |
| | ERAVE-EASON | BTG, OLM, HQM, HUH, LTJ, CVO, DSD, OED, UBG, ONP, EUG |
| | EASON-EBINY | CVO, DSD, OED, BTG, UBG, ONP, EUG, LMT |
| | EBINY-ENVIE | CVO, OED, EUG, LMT, RBL, ENI, ONP, FJS |
| | ENVIE-ETCHY | OED, PYE, OAK, LIN, ECA, LMT, RBL, ENI, SAC, FJS |
| | ETCHY-POINT REYES | LIN, ECA, RBL, ENI, SAC, OAK |
| Q2 | BOILE-HEDVI | HEC, PDZ, OCN, PMD, LAX, RZS, IPL, TRM, PKE, BLH, EED, BZA, GBN, PXR |
| | HEDVI-HOBOL | BZA, GBN, BLH, EED, PXR, IPL, TFD, DRK, TUS |
| | HOBOL-ITUCO | TFD, GBN, BLH, PXR, TUS, CIE, SSO |
| | ITUCO-NEWMAN | EWM, TFD, PXR, CIE, SSO, TUS, TCS |
| Q3 | FEPOT-FAMUK | OLM, TOU, HQM, CVO, BTG, DSD, LTJ, UBG, ONP, EUG |
| | FAMUK-FRFLY | BTG, DSD, OED, CVO, EUG, ONP, UBG, RBL, LMT |
| | FRFLY-FINER | OED, EUG, RBL, LMT, ENI, CVO, FJS |
| | FINER-FOWND | OED, PYE, ECA, LIN, OAK, ENI, RBL, LMT, SAC, FJS |
| Q4 | FOWND-POINT REYES | LIN, ECA, PYE, RBL, SAC, ENI |
| | BOILE-HEDVI | HEC, PDZ, OCN, PMD, LAX, RZS, IPL, TRM, PKE, BLH, EED, BZA, GBN, PXR |
| | HEDVI-SCOLE | EED, BLH, BZA, GBN, TRM, IPL, TFD |
| | SCOLE-SPTFR | EED, BLH, BZA, GBN, TRM, IPL, TFD |
| | SPTFR-ZEBOL | EED, IPL, BZA, GBN, TFD, PXR, BLH |
| | ZEBOL-SKTR | PXR, BLH, BZA, GBN, TFD, TUS, SSO, CIE, SVC, TCS |
| | SKTR-EL PASO | EWM, CUS, SVC, TCS, SSO, CIE, ELP, DMN, CME |
| | HAROB-HISKU | OLM, ONP, CVO, EUG, HQM, UBG, BTG, LTJ, DSD, HUH |
| Q5 | HISKU-HARPR | ONP, CVO, EUG, LTJ, DSD, UBG, BTG, RBL, OED, LMT, FJS, LKV |
| | HARPR-HOMEG | CVO, EUG, OED, RBL, LMT, ENI, FJS, LKV |
| | HOMEG-HUPTU | SAC, PYE, LIN, OAK, ECA, LMT, RBL, ENI, OED, FJS |
| | HUPTU-STIKM | OAK, ECA, PYE, LIN, SAC, ENI, RBL |
| Q7 | JINMO-JOGEN | CVO, HQM, LTJ, UBG, BTG, ONP, IMB, EUG, OLM, DSD, YKM, PDT, SEA |
| | JOGEN-JUNEJ | LTJ, IMB, UBG, EUG, CVO, RBL, LMT, FMG, DSD, LKV, OED, BTG |
| | JUNEJ-JAGWA | RBL, LMT, FMG, LIN, SAC, ECA, ENI, MOD, SWR, OAK, LKV, CZQ, AVE, SNS |
| | JAGWA-AVENAL | OAK, MOD, ECA, EHF, PRB, AVE, SNS, CZQ |
| Q9 | SUMMA-SMIGE | OLM, UBG, SEA, YKM, BTG, ONP, IMB, HQM, PDT, EUG, LTJ, CVO, DSD, OED, EPH, MWH |
| | SMIGE-SUNBE | IMB, UBG, EUG, IMB, RBL, LMT, FMG, SAC, OED, CVO, LKV, DSD, BTG |
| | SUNBE-REBRG | RBL, LMT, FMG, SAC, ECA, MVA, CZQ, OAK, EHF, PMD, LKV, LIN, MOD, AVE, OED, SWR |
| | REBRG-DERBB | CZQ, PMD, EHF, LAX, RZS, AVE, MOD, ECA |
| Q11 | PAAGE-PAWLI | EPH, UBG, CVO, EUG, HQM, YKM, OLM, PDT, BTG, ONP, IMB, LTJ, DSD, LKV, OED, SEA |
| | PAWLI-PITVE | EUG, FMG, SAC, IMB, LKV, OED, DSD, RBL, LMT, CVO, REO |
| | PITVE-PUSHH | FMG, SAC, LIN, SWR, MOD, OAL, RBL, LKV, LMT, MVA, CZQ |
| | PUSHH-LOS ANGELES | SAC, ECA, FMG, LIN, OAL, MOD, EHF, LAX, PMD, PDZ, HEC, OCN, CZQ, AVE, RZS |
| Q13 | All segments | None; GNSS required |
| Q15 | All segments | None; GNSS required |
| Q19 | PLESS-NASHVILLE | ENL, GQO, PXV, BNA, IIU, FAM, BWG, CSX |
| Q20 | CORONA-HONDS | CNX, ABQ, ACH, ONM, TXO, LVS, TCC, CME |
| | HONDS-UNNOS | CNX, INK, CME, TXO, TCC |
| | UNNOS-FUSCO | FST, ACH, INK, CME, SJT, TXO, TCC |
| | FUSCO-JUNCTION | ABI, CWK, CSI, INK, LZZ, JCT, SJT, STV, FST |
| Q21 | JONEZ-RAZORBACK | BYP, EOS, TUL, TXK, ADM, RZC, OKM |
| Q22 | GUSTI-ACYST | AEX, DAS, MCB, LLA, BTR, LCH, HRV, LFT, LEV |
| | OYST-OCMES | RQR, GCV, MCB, BTR, PCU, GPT, HRV, LEV, SJI |
| | ACMES-CATLN | SJI, MGM, MCB, BFM, GPT, GCV, HRV, CEW, MVC, PCU, MEI |

| Route | Segment | DME |
|-------------------|--------------------------|--|
| Q23 Q24 | FORT SMITH-RAZORBACK | OKM, RZC, EOS, TUL |
| | LAKE CHARLES-BATON ROUGE | AEX, DAS, LCH, MCB, LFT, BTR |
| Q25 | BATON ROUGE-IRUBE | AEX, LEV, MCB, LCH, RQR, HRV, BTR, GCV, MCB, PCU, SJI, LBY |
| | IRUBE-PAYTN | GCV, MCB, JYU, PCU, MEI, HRV, CEW, SJI |
| Q26 Q27 Q28 | MEEOW-WALNUT RIDGE | ELD, MEM, LIT, FAM, RZC |
| | WALNUT RIDGE-WLSUN | MEM, STL, BWG, PXV, ENL, FAM, ARG, BNA, CSX, TTH |
| | WLSUN-POCKET CITY | BWG, PXV, ENL, BNA, TTH |
| Q29 | WALNUT RIDGE-DEVAC | LIT, JKS, GQO, MEM, BNA, FAM, ARG, DYR, VUZ, RMG |
| | FORT SMITH-ZALDA | OKM, SGF, RZC, EOS, TUL |
| Q30 Q31 | GRAZN-PYRMD | EIC, LIT, ELD, OKM, TXK |
| | PYRMD-HAKAT | ARG, LIT, FAM, ELD, SGF, RZC, MEM, TXK |
| Q32 | HAKAT-ESTEE | ARG, LIT, FAM, SGF, MEM |
| | ESTEE-POCKET CITY | ARG, CSX, FAM, PXV, ENL, MEM, STL, BWG, TTH, BNA |
| Q33 | HARES-MEMPHIS | MEM, ARG, LIT, JAN, ELD, SQS |
| | MEMPHIS-SIDAE | MEM, PXV, BNA, BWG, ARG, ENL |
| Q34 | SIDAE-POCKET CITY | PXV, TTH, BWG, ENL |
| | SIDON-VULCAN | GLH, MEM, VUZ, JAN, JYU, MEI, MGM, SQS, RMG |
| Q35 | DHART-JODOX | SQS, LIT, TXK |
| | JODOX-MARVELL | SQS, LIT, ELD, MEM, ARG |
| Q36 | MARVELL-TIIDE | ARG, BWG, PXV, FAM, LIT, MEM, ENL, TTH |
| | TIIDE-POCKET CITY | BWG, PXV, ENL, TTH |
| Q37 | EL DORADO-GAGLE | AEX, JAN, MEM, SQS, SWB, ELD, LIT, TXK |
| | GAGLE-CRAMM | JAN, SQS, MEM, ARG, VUZ, BNA, LIT |
| Q38 | CRAMM-NASHVILLE | BWG, MEM, VUZ, BNA, GQO |
| | NASHVILLE-SWAPP | BWG, IIU, PXV, VXV, BNA, GQO |
| Q39 | DHART-LITTLE ROCK | AEX, ELD, LIT, TXK, SWB, ARG, MEM, SQS |
| | LITTLE ROCK-PROWL | ELD, SGF, FAM, LIT, ARG, MEM, RZC, CSX, STL |
| Q40 | TEXARKANA-MATIE | LIT, SWB, TXK, BYP, EIC, ELD, SQS |
| | MATIE-MEMPHIS | LIT, ARG, MEM, ELD, SQS |
| Q41 | MEMPHIS-SWAPP | BWG, ARG, MEM, MKL, SQS, PXV, BNA, GQO, IIU, VXV |
| | KIMBERLY-NEERO | LTJ, PDT, DSD, IMB, LKV, BOI, REO, BAM, SDO |
| Q42 | NEERO-WINEN | BQU, SDO, BAM, REO, BVL, ILC, DTA, ELY, CDC, MLF, BCE |
| | WINEN-CORKR | CDC, BCE, BLD, ILC, MLF, TBC, PGS, INW, DRK |
| Q43 | CORKR-DRAKE | TBC, BCE, BLD, DRK, PGS, FLG, GCN, INW, TFD |
| | RAZORBACK-TWITS | RZC, MEM, SGF, BUM, TUL, EOS, FAM, ARG, LIT |
| Q44 | TWITS-DEPEC | MEM, GQO, BNA, BWG, FAM, ARG, PXV, IIU |
| | DEPEC-NASHVILLE | GQO, BWG, BNA, PXV, IIU |
| Q45 | NASHVILLE-SWAPP | VXV, BWG, BNA, GQO, PXV, IIU |
| | ROKIT-INCIN | DAS, LCH, SWB, IAH, LFK, HUB, AEX |
| Q46 | INCIN-LAREY | JAN, MCB, SWB, AEX |
| | LAREY-BESOM | JAN, JYU, MEI, SQS, VUZ |
| Q47 | ALEXANDRIA-DOOMS | AEX, SWB, LCH, JAN, HEZ, MCB |
| | DOOMS-WINAP | JAN, SQS, MEI, MCB |
| Q48 | WINAP-MISLE | MEI, VUZ, JYU |
| | KIRKSVILLE-STRUK | CID, IOW, UIN, LMN, IRK, BDF, STL, DEC, ENL, CSX |
| Q49 | STRUK-DANVILLE | ENL, IOW, UIN, BDF, DEC, STL, CSX, SPI, TTH, BVT, JOT, VHP, OXI, ENL, OKK, OBK, GIJ, FWA, GSH, IRK |
| | DANVILLE-MUNCIE | GIJ, SPI, BDF, OBK, OKK, VHP, BVT, DEC, GSH, FWA, JOT, TTH, OXI, ROD, FLM |
| Q50 | MUNCIE-HIDON | FLM, VHP, GSH, TTH, GIJ, OKK, FWA, ROD, OXI, CRL, GSH, APE, DJB, DXO, HNN, AIR, HVQ, CXR, EWC |
| | HIDON-BUBAA | AIR, APE, HNN, CXR, HVQ, EWC, DJB |
| Q51 | BUBAA-PSYKO | AIR, APE, DJB, CXR, HNN, EWC, SLT, CSN, JHW, ETG, PSB |
| | PSYKO-BRANAN | PSB, JHW, EWC, AIR, ETG, CSN, EMI, SLT |
| Q52 | BRANAN-MAALS | EMI, SLT, CSN, EWC, PSB, ETG, SAX, RBV, HNK, HUO, SIE |
| | MAALS-SUZIE | ETG, EMI, CSN, HUO, SIE, JFK, PSB, SLT, HNK |
| Q53 | SUZIE-EAST TEXAS | JFK, EMI, PSB, SLT, HNK, SIE, RBV, SAX, HUO, CYN |
| | EAST TEXAS-ELIOT | HUO, RBV, EMI, CYN, SAX, JFK, PSB, HNK |
| Q54 | DEFUN-HEVVN | PIE, PZD, CRG, SZW, TAY, JYU, CEW, MGM, OTK, CRG |
| | HEVVN-PLYER | PIE, ORL, OMN, SRQ, TAY, LAL, CRG, SZW, PZD |
| Q55 | PLYER-SWABE | PIE, ORL, OMN, SRQ, TAY |
| | SWABE-ST PETERSBURG | LAL, ORL, OMN, SRQ, PHK, PIE |
| Q56 | ST PETERSBURG-CYPRESS | PHK, PBI, SRQ, PIE, VRB, ORL, FLL, LAL, OMN |

| Route | Segment | DME |
|-------------|--------------|---|
| Q106 | SMELZ–BULZI | LAL, ORL, OMN, PHK, PIE, CRG, VRB, TAY, OTK, PZD, AMG, SZW |
| | BULZI–DRABK | AMG, PZD, TAY, CRG, SZW, MGM, OTK, JYU, CEW, SJI |
| | DRABK–GADAY | MGM, PZD, OTK, JYU, SZW, CEW, SJI |
| Q108 | GADAY–HKUNA | CEW, JYU, MGM, SZW, RRS, PZD, MAI, OTK, GEF, MGR, TAY, AMG, CRG |
| Q110 | THNDR–JAYMC | SRQ, VRB, PHK, PIE, LAL, VKZ, ORL, PBI |
| | JAYMC–RVERO | VKZ, VRB, PHK, PIE, LAL, SRQ, ORL, OMN, PBI, DHP |
| | RVERO–KPASA | OMN, PIE, PBI, SRQ, ORL, LAL |
| Q112 | KPASA–BRUTS | SRQ, VRB, ORL, PHK, TAY, PIE, OMN, OTK, LAL, CRG, SZW, AMG |
| | BRUTS–GULFR | OMN, AMG, CRG, SZW, PIE, TAY, PZD, OTK |
| | GULFR–FEONA | TAY, MCN, PZD, CRG, OTK, SZW, AMG, MCN, ATL, MGM |
| | DEFUN–HEVVN | PIE, OTK, CRG, OMN, LAL, SZW, SRQ, ORL, VRB |
| Q116 | HEVVN–INPIN | JYU, PZD, CEW, SZW, MGM, OTK, TAY, AMG, PIE, CRG |
| | KPASA–BRUTS | SRQ, VRB, ORL, PHK, TAY, PIE, OMN, OTK, LAL, CRG, SZW, AMG |
| | BRUTS–GULFR | OMN, AMG, CRG, TAY, LAL, PZD, SZW, OTK |
| Q118 | GULFR–CEEYA | MCN, AMG, PZD, OTK, SZW, TAY |
| | KPASA–BRUTS | SRQ, VRB, ORL, PHK, TAY, PIE, OMN, OTK, LAL, CRG, SZW, AMG |
| | BRUTS–LENIE | OMN, AMG, CRG, TAY, LAL, PZD, SZW, OTK, MCN |
| Q501 | VIXIS–GOPHER | ECK, FNT, APN, SSM, GRR, MBL, SAW, BAE, MNM, DLL, AUW, ODI, STE, FGT, EAU |
| | | DLH, GEP, BRD, MCW, MSP, ASP, TVC, GRB, RWF |
| Q502 | GOPHER–SOBME | FGT, BRD, MCW, GEP, ABR, FAR, DLH, ODI, RWF, FSD |
| | KENPA–GOPHER | SSM, FNT, ECK, APN, SAW, GRB, BAE, DLL, AUW, ODI, FGT, DLH, EAU, MCW, MSP, MNM, ASP, TVC, GEP, RWF, BRD |
| Q504 | GOPHER–SOBME | FGT, DLH, ODI, MCW, ABR, FAR, MSP, GEP, RWF, FSD, BRD |
| | NOTAP–CESNA | SSM, ECK, APN, GLR, PLN, ISQ, MNM, DLL, RHI, DLH, GEP, FGT, ODI, ASP, TVC, SAW, GRB, BRD |
| Q505 | CESNA–HEMDI | ODI, GEP, DLH, FGT, RWF, FAR, AXN, FSD, ABR, DLL, BRD |
| | OMAGA–RIMBE | SSM, TVC, ASP, SAW, GRB |
| | RIMBE–CESNA | SSM, RHI, DLL, DLH, GEP, FGT, TVC, SAW, GRB, BRD, ODI |
| | CESNA–HEMDI | GEP, DLH, FGT, RWF, FAR, AXN, FSD, ABR, BRD, ODI, GRB |

RNAV Routing Pitch and Catch Points

The purpose of this section of the Special High Altitude Routes is to present user routing options for flight within the initial HAR Phase I expansion airspace. Users are able to fly user-preferred routes, referred to as non-restrictive routing (NRR), between specific fixes described by **pitch** (entry into) and **catch** (exit out of) fixes in the HAR airspace. Pitch points indicate an end of departure procedures, preferred IFR routings, or other established routing programs where a flight can begin a segment of NRR. The catch point indicates where a flight ends a segment of NRR and joins published arrival procedures, preferred IFR routing, or other established routing programs.

The HAR Phase I expansion airspace is defined as that airspace at and above FL 350 in fourteen of the western and southern Air Route Traffic Control Centers (ARTCCs). The airspace includes Minneapolis (ZMP), Chicago (ZAU), Kansas City (ZKC), Denver (ZDV), Salt Lake City (ZLC), Oakland (ZOA), Seattle Centers (ZSE), Los Angeles (ZLA), Albuquerque (ZAB), Fort Worth (ZFW), Memphis (ZME), and Houston (ZHU). Jacksonville (ZJX) and Miami (ZMA) are included for east-west routes only.

To develop a flight plan, select pitch and catch points based upon your desired route across the Phase I airspace. Filing requirements to pitch points, and from catch points, remain unchanged from current procedures. For the portion of the route between the pitch and catch points, non-restrictive routing is permitted.

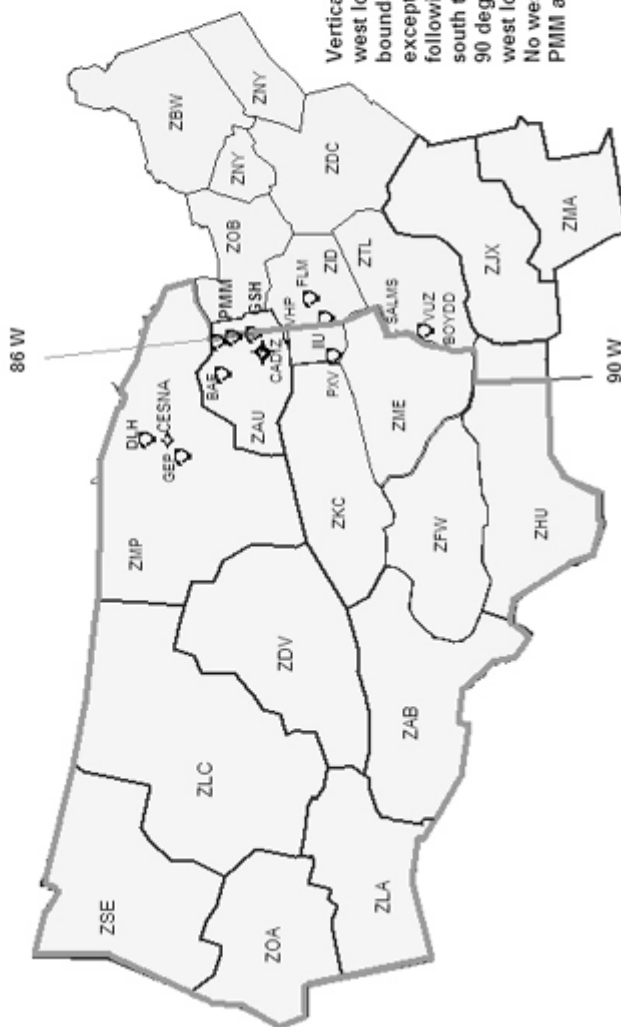
Where pitch points for a specific airport are not identified, aircraft should file an appropriate departure procedure (DP), or any other user preferred routing prior to the NRR portion of their routing. Where catch points for a specific airport are not identified aircraft should file, after the NRR portion of their routing, an appropriate arrival procedure or other user preferred routing to their destination.

Additionally, information concerning the location and schedule of Special Use Airspace (SUA) and Air Traffic Control Assigned Airspace (ATCAA) can be found on the Web Site: <http://sua.faa.gov/sua/Welcomes.do>. ATCAA refers to airspace in the high altitude structure supporting military and other special operations. Users are encouraged to file around these areas when they are scheduled to be active, thereby avoiding unplanned reroutes around them.

In conjunction with the HAR program RNAV routes have been established to provide for a systematic flow of air traffic in specific portions of the enroute flight environment. The designator for these RNAV routes begin with the letter Q, for example, Q-501. Where those routes aid in the efficient orderly management of air traffic they will be published as preferred IFR routes.

High Altitude Redesign (HAR) Phase One Expansion Airspace

Except as noted, flights entering HAR expansion airspace may pitch at the airspace boundary, at the vertical pitch line, or at the fixes listed on the following page.



Vertical Pitch Line: 86 degrees west longitude from the ZMP/ZAU boundary to the ZME/ZID boundary, except between PMM and GSH, then following the ZME east boundary south to the ZHU boundary. Then west to 90 degrees west longitude, the 90 degrees west longitude to the ZHU southern boundary. No westbound traffic between PMM and GSH.

HAR Special High Altitude Pitch (entry) Points for Nonrestrictive Routing for Airports Located Outside HAR Phase I Expansion Airspace

Westbound traffic originating outside of HAR airspace entering ZMP, ZAU, ZKC and ZME can begin non-restrictive routing over any of the following pitch points (listed from north to south):

DLH, CESNA, GEP, BAE, MKG, GRR, PMM, GSH, CADIZ, FWA, VHP, FLM, IIU, PXV, SGF, RZC, BNA, SALMS, VUZ, BOYDD, MIE.

Traffic originating outside of HAR airspace may also begin Nonrestrictive Routing upon crossing the pitch line depicted on the associated graphic.

HAR Special High Altitude Pitch Points for Airports Located Within (below) HAR Phase I Expansion Airspace

This section lists pitch points for airports within the HAR Phase I expansion airspace.

| | |
|---|---|
| Albuquerque | ABQ, GUP, HANOS or ZUN |
| Austin | ABI, FUZ, JCT, MQP, NAVYS, SJT or TNV |
| Boca Raton, FL | TBIRD KPASA Q118 LENIE or TBIRD KPASA Q116 CEEYA or TBIRD KPASA Q110 FEONA or TBIRD SMELZ Q106 BULZI or TBIRD SMELZ Q106 GADAY |
| Burbank includes Santa Monica and Van Nuys | GMN, MARKS or DAG LAS or HEC EED or PMD BLH |
| Chicago Terminal Area | IOW, PLL275065, MZV or BAE |
| Dallas/Fort Worth Terminal Area | ABI, LBB, GTH, CDS, MRMAC, IRW, TUL, MLC, TXK ELD, SWB or Aircraft destined the Chicago terminal area Except MDW EAKER MIDEE BDF BRADFORD-STAR Or MLC J105 SGF BDF BRADFORD-STAR |
| Denver Terminal Area | PUB, DVC, DBL, RLG, EKR, LAR, MBW, CYS, BFF, HANKI, NATTI, ASHBY, BELKE, CABET, WEEDS, OR BINKE |
| Fort Lauderdale (or) Fort Lauderdale Executive | THNDR KPASA Q118 LENIE or THNDR KPASA Q116 CEEYA or THNDR KPASA Q110 FEONA or THNDR SMELZ Q106 GADAY or THNDR SMELZ Q106 BULZI |
| Houston Bush | LIT, ELD, MLC, JCT or Aircraft destined Atlanta Terminal Area LCH Q24 PAYTN HONIE-RNAV STAR or Aircraft joining J37 to the northeast, GUSTI SID GUSTI Q22 CATLN or Aircraft joining J42 to the northeast, EL DORADO SID ELD Q32 J42 |

| 380 | HIGH ALTITUDE REDESIGN (HAR) PHASE 1 RNAV ROUTING |
|--------------------------------------|--|
| Houston Hobby | LIT, ELD, MLC, JCT, or Aircraft joining J42 to the northeast, EL DORADO SID ELD Q32 J42 |
| Jacksonville, FL | TAY |
| Kansas City Terminal Area | TIFTO, CATTS or KENTN |
| Los Angeles, includes Ontario | GMN, RZS or DAG LAS or TRM EED or TRM PKE |
| Las Vegas | DOBNE, MOSBI, NICLE, TRALR or ZELOT |
| Long Beach includes Orange County | GMN SNS, EHF, LANDO or TRM PKE or TRM EED |
| Memphis | BNA, HAAWK, SALMS or SQS |
| Miami Terminal Area | WINCO KPASA Q118 LENIE or WINCO KPASA Q116 CEEYA or WINCO KPASA Q110 FEONA or WINCO SMELZ Q106 GADAY or WINCO SMELZ Q106 BULZI |
| Milwaukee | GREAS |
| Minneapolis Terminal Area* | ONL, ABR, FAR, OBH, OVR, FOD |
| New Orleans Terminal Area | AEX, MEI, SQS, KAPLN |
| Orlando Terminal Area | WEBBS BRUTS Q118 LENIE or WEBBS GULFR Q116 CEEYA or WEBBS BULZI Q106 GADAY or WEBBS FEONA or WEBBS BULZI |
| Palm Beach, FL | TBIRD KPASA Q118 LENIE or TBIRD KPASA Q116 CEEYA or TBIRD KPASA Q110 FEONA or TBIRD SMELZ Q106 BULZI or TBIRD SMELZ Q106 GADAY |
| Palm Springs | TRM JOTNU BLD or TRM EED or TRM PKE |
| Phoenix | CHILY, CIE, CULTS, RSK, DOVEE, GCN, MESSI, SJN, DRYHT or MOHAK |
| Portland, OR | PDT, TIMEE |

| | |
|---|--|
| Salt Lake City | HVE, DTA, MLF, BCE, OAL, MTU, BVL, OCS, TWF, DBS, BPI or TCH J56 CHE or TCH J173 EKR |
| Saint Louis | VIH, MAP, MYERZ, MCM or HLV MCI |
| San Antonio Terminal Area | FUZ, SJT, MQP, ABI or Aircraft North of LFK, LFK or Aircraft South of HUB, ELA or Aircraft South of LFK and North of HUB LCH |
| San Diego | TRM EED or TRM PKE or TRM JOTNU BLD |
| San Francisco Bay Area | GALLI, INSLO, HAROL JSICA |
| Oakland | GALLI, INSLO, HAROL JSICA |
| San Jose | GALLI or INSLO |
| Seattle | BLUIT |
| Southwest Florida Airports (RSW/FMY) | JOCKS KPASA Q118 LENIE or JOCKS KPASA Q116 CEEYA or JOCKS KPASA Q110 FEONA or JOCKS SMELZ Q106 GADAY or JOCKS SMELZ Q106 BULZI |
| Tampa Terminal Area | FEONA, BULZI or BRUTS Q118 LENIE or GULFR Q116 CEEYA or BULZI Q106 GADAY |

*MSP area departures with destinations east of 93 degrees west longitude via preferred IFR routing.

Catch Points for Airports Located Outside HAR Phase I Expansion Airspace

This section lists exit points for aircraft destined to specific destinations which are outside the HAR Phase I airspace.

| | |
|-----------------------|--|
| Atlanta Terminal Area | Aircraft through ZME airspace from ZKC airspace east of FAM, Pless Q19 BNA or Aircraft through ZME airspace from ZKC airspace west of FAM, ARG Q26 DEVA or MEM or Aircraft through ZME airspace from ZID airspace west of a line from VHP to BWG, BNA or Aircraft through ZME airspace from ZID airspace east of a line from VHP to BWG, BWG or Aircraft through ZME airspace from ZFW airspace, MEM or MEI HONIE (RNAV)–STAR or PATYN HONIE (RNAV)–STAR |
|-----------------------|--|

| 382 | HIGH ALTITUDE REDESIGN (HAR) PHASE 1 RNAV ROUTING |
|--|---|
| Baltimore–Washington* | GIJ, GEP, FLM, IIU, BAE, VHP, WHETT, BNA or VUZ |
| Boston* | GEP, CRL, ECK, IIU, BNA or VUZ |
| Buffalo* | GEP, CRL |
| Hartford Bradley* | GEP, CRL |
| Canton–Akron* | GIJ, VHP, GEP |
| Charlotte | BNA, VUZ |
| Cincinnati Terminal Area | BNA, PXV or Aircraft north of SLC, JOT or Aircraft over or south of SLC, ENL or SLC or SFO departures, ENL, JOT |
| Cleveland Terminal Area* | OBK |
| Detroit Terminal Area | BAE MKG POLAR–STAR or VHP FWA MIZAR–STAR |
| Detroit Young | VHP FWA or LAN SPRTN–STAR |
| Indianapolis Terminal Area | BIB, SPI, JOT |
| Louisville | ENL, MEM |
| Newark* | GEP, VHP, FLM, IIU, BNA, VUZ or IOW GIJ J554 CRL J584 SLT FQM |
| New York Kennedy* | GEP, VHP, FLM, IIU, BNA, VUZ or DBQ J94 PMM J70 LVZ LENDY–STAR |
| New York LaGuardia* | GIJ, GEP, VHP, BAE, FLM, IIU, BNA, VUZ |
| Philadelphia Terminal Area* | GIJ, GEP, VHP, BAE, WHETT, BNA, VUZ |
| Pittsburgh Terminal Area* | VHP, GIJ, BAE, GEP |
| Pontiac | LFD, LAN, VHP, FWA, GEP |
| Providence | JHW, HEMDI, CESNA, GEP, GRB, TVC, ASP, VHP, IIU, BNA, VUZ |
| Raleigh–Durham | FLM, IIU, BNA, VUZ |
| Toronto Terminal Area | ECK, SVM, SSM, GEP |
| Teterboro* | GEP, VHP, CRL, BNA, VUZ |
| Washington Dulles/National* | GIJ, GEP, FLM, IIU, BAE, VHP, WHETT, BNA, VUZ |
| White Plains* | GEP, VHP, CRL, FLM, IIU, BNA, VUZ |
| Willow Run* | LAN, LFD, VHP, FWA, GEP |
| *Eastbound aircraft over flying ZMP center airspace entering Toronto center airspace, file direct SSM or via J63, J522 Q505, Q504, Q502, Q501 or Entering ZAU or ZOB airspace from north of DPR J16 MCW, GEP or Entering ZAU or ZOB airspace from or south of DPR J16 MCW, CRL. | |

Catch Points for Airports Located Within (below) HAR Phase I Expansion Airspace

This section lists exit points for aircraft destined to airports which are below HAR Phase I airspace.

| | |
|---------------------------------|--|
| Albuquerque Terminal Area | CURLY CURLY–STAR or ESPAN FRIHO–STAR or LAVAN LAVAN–STAR or FTI FRIHO–STAR or MIERA MIERA–STAR |
| Austin Terminal Area | Aircraft west of a north–south line at LFK, BLEWE or Aircraft east of a north–south line at LFK, IDU or LLO |
| Boca Raton, FL | CEW DEFUN Q112 INPIN SHDAY (RNAV)–STAR Aircraft through ZHU remain south of ZME and ZTL airspace or DEFUN Q112 INPIN SHDAY (RNAV)–STAR Aircraft through ZHU remain south of ZME and ZTL airspace or SZW INPIN SHDAY (RNAV)–STAR |
| Chicago Midway | CVA MOTIF–STAR or PIA MOTIF–STAR or DBQ CVA MOTIF–STAR or LMN MOTIF–STAR |
| Chicago O'Hare Terminal Area | GEP DLL MSN JVL JANESVILLE–STAR or TVC PULLMAN–STAR or FOD DBQ JVL JANESVILLE–STAR or MCW JANESVILLE–STAR or GCK IRK BRADFORD–STAR |
| Dallas/Fort Worth Terminal Area | IRW, LOSZY, FSM, LIT, SQS, MLU, AEX, JUMBO, TQA, TURKI, HEATR Aircraft through ZME airspace from north and west of PXV, RZC, Q23 FSM or Aircraft through ZME airspace from east of PXV, PXV Q25 MEEOW or Aircraft through ZME airspace from J6 down to, but not including J52, LIT, SQS or Aircraft through ZME airspace from J52 and south of J52, SQS |

| 384 | HIGH ALTITUDE REDESIGN (HAR) PHASE 1 RNAV ROUTING | |
|---|---|--|
| Denver Terminal Area | OATHE DANDD–STAR or HGO QUAIL–STAR or LOPEC–STAR or ALS LARKS–STAR or HBU POWDR–STAR or EKR TOMSN–STAR or CHE TOMSN–STAR or BFF LANDR–STAR or LBF SAYGE–STAR or HCT SAYGE–STAR or RSK LARKS–STAR or LAA QUAIL–STAR or GCK J154 RYLIE DANDD–STAR or OCS J154 ALPOE RAMMS–STAR or YANKI J114 SNY LANDR–STAR or Aircraft filed BIL or east, MBW RAMMS–STAR | |
| Ft Lauderdale or Ft Lauderdale Executive | CEW DEFUN Q104 PIE SWAGS (RNAV)–STAR Aircraft through ZHU airspace remain south ZME and ZTL airspace or SZW HEVVN Q104 PIE SWAGS (RNAV)–STAR | |
| Houston Bush | CRP, CVE, LLO, LUKIY, SAT or Aircraft south and east of LLA, JEPEG or MISLE Q40 AEX or Aircraft north and east of SJI, SJI or Aircraft east of PXV, PXV Q31 DHART SWB or Aircraft north and west of PXV, PROWL Q33 DHART SWB | |
| Houston Hobby | CRP, ELLVR, SAT, SWB or Aircraft south and east of GIRLY, KCEEE or Aircraft north and east of SJI, SJI or BESOM Q38 ROKIT ROKIT–STAR or Aircraft east of PXV, PXV Q29 HARES SWB or Aircraft north and west of PXV, PROWL Q33 DHART SWB | |
| Jacksonville | GADAY ZOOSS TAY Aircraft through ZHU airspace remain south of ZME and Z airspace or ZOOSS TAY | |

| | |
|---------------------------|---|
| John Wayne–Orange County | HEC, PGS, BLD or Aircraft south of TBC from ZAB airspace, HIPPI |
| Kansas City Terminal Area | LMN BRAYMER–STAR or PWE ROBINSON–STAR or EMP JHAWK–STAR |
| Las Vegas | DILCO, LIDAT, IGM or Aircraft over PGA or north of PGA KSINO or Aircraft south of PGA PGS LYNBY |
| Los Angeles Terminal Area | Aircraft North of TBC, HEC, PGS or Aircraft South of TBC from ZAB airspace, HIPPI, MESSI |
| Miami Terminal Area | CEW DEFUN Q104 CYY DEEDS (RNAV)–STAR Aircraft through ZHU airspace remain south ZME and ZTL airspace or SZW HEVBN Q104 CYY DEEDS (RNAV)–STAR |
| Minneapolis Terminal Area | Aircraft from north, west, south, FAR GOPHER–STAR or RWF SKETR–STAR or ALO KASPR–STAR or BRD GOPHER–STAR or BAE EAU CLAIRE–STAR or FOD TWOLF–STAR |
| Memphis Terminal Area | ARG, BWG, FSM, PXV, LIT, RZC, SQS, VUZ, BNA, GQO, ELD |
| Naples, FL | CEW DEFUN Q104 PLYER PIKKR (RNAV)–STAR Aircraft through ZHU AIRSPACE remain south of ZME and ZTL airspace or SZW HEVBN Q104 PLYER PIKKR (RNAV)–STAR |
| Nashville | CCT, GHM, GUITR, TINGS, VOLLS |
| New Orleans Terminal Area | BLUEZ, GPT, LCH, MCB, TBD, FATSO |
| Oakland | ILA or KATTS PAMMY or Aircraft over or south of a line ILC J16 DVC REANA KATTS PAMMY or Aircraft from north of ILC, JOPER PAMMY or KATTS PAMMY or Aircraft over or south of ILC, REANA KATTS PAMMY |
| Orlando Terminal Area | GADAY Q108 CLAWZ LEESE–STAR Aircraft through ZHU airspace remain south of ZME/ZTL airspace or OTK LEESE–STAR |

| | |
|------------------------------|---|
| Palm Beach, FL | CEW DEFUN Q112 INPIN GULLO (RNAV)–STAR Aircraft through ZHU airspace remain south of ZME and Z airspace or SZW INPIN GULLO (RNAV)–STAR |
| Phoenix | CORKR DRK or Aircraft from ZDV airspace, GUP or Aircraft from ZAB airspace, ZUN, MOHAK, SSO or VYLLA TUS |
| Phoenix Satellites | FLG, SSO, MOHAK or VYLLA, TUS |
| Portland, OR Terminal Area | ARNIT BONVL–STAR or LARNO BONVL–STAR or MOXEE MOXEE–STAR |
| St. Louis Terminal Area | SGF TRAKE–STAR or BUM TRAKE–STAR or ANX TRAKE–STAR or LMN IRK RIVRS–STAR or RBS VANDALIA–STAR |
| Salt Lake City Terminal Area | JNC J12 HELPR SPANE–STAR or EKR MTU SPANE–STAR or BCE DTA–TCH or MLF DTA–TCH or BVL BONNEVILLE–STAR or BYI BEARR–STAR or PIH BEARR–STAR or DBS BRIGHAM CITY–STAR or JAC BRIGHAM CITY–STAR or BPI BRIGHAM CITY–STAR or OCS BRIGHAM CITY–STAR |
| San Diego Terminal Area | EED, LAX, GBN |
| Santa Ana | HEC, PGS, BLD, HIPPI |
| San Antonio Terminal Area | IDU, CSI, JCT, LLO, CRP, LRD or West of a north–south line at LFK, BLEWE or East of a north–south line at LFK, IDU |

| | |
|---|---|
| San Francisco | FMG GOLDEN GATE--STAR |
| | or |
| | MVA MODESTO--STAR |
| | or |
| | ENI GOLDEN GATE--STAR |
| | or |
| | OAL MODESTO--STAR |
| | or |
| San Jose | South of a line ILC to DVC, REANA KATTS OAL MODESTO--STAR |
| | FMG HYP EL NIDO--STAR |
| | or |
| | OAL HYP EL NIDO--STAR |
| | or |
| | ENI GOLDEN GATE--STAR |
| | or |
| | South of a line ILC to DVC, REANA KATTS KICHI CANDA EL NIDO--STAR |
| Seattle Terminal Area | Aircraft From northeast, southeast, south, TEMPL GLASR--STAR |
| | or |
| | SUNED CHINS--STAR |
| | or |
| Southwest Florida Airports RSW and FMY | BTG OLMYPIA--STAR |
| | CEW DEFUN Q104 SWABE JOSFF--STAR |
| | Aircraft through ZHU airspace remain south of ZME and ZTL airspace |
| | or |
| Tampa Terminal Area | SZW HEVYN Q104 SWABE JOSFF--STAR |
| | CEW DEFUN Q104 HEVYN DARBS--STAR |
| | Aircraft through ZHU airspace remain south of ZME and ZTL airspace |
| | or |
| Tucson | SZW DARBS--STAR |
| | DRK PXR |
| | or |
| | MOHAK GBN |

VISUAL FLIGHT RULES (VFR) WAYPOINTS

VFR Waypoint names consist of five letters beginning with "VP". Stand-alone VFR Waypoints are portrayed on VFR Charts using the same four-point star symbol currently used for Instrument Flight Rules (IFR) Waypoints.

VFR Waypoints collocated with Visual Checkpoints (Visual Reporting Points) are portrayed with a Visual Check Point flag. The VFR Waypoint name is shown in parentheses adjacent to the Visual Check Point name.

VFR Waypoint names are not intended to be pronounceable and shall not be used in ATC communications.

CAUTION: GPS accuracy necessitates extra vigilance for other aircraft when navigating near any fix retrieved from a GPS database.

BALTIMORE–WASHINGTON TERMINAL AREA CHART/FLYWAY CHART

| WAYPOINT IDENT | COLLOCATED VFR CHECKPOINT | LOCATION |
|----------------|---------------------------|------------------------|
| VPAXI | _____ | N38°34.57'/W076°20.38' |
| VPONX | _____ | N39°06.65'/W076°55.92' |
| VPOOP | _____ | N38°56.32'/W076°36.90' |

BOSTON HELICOPTER CHART

| | | |
|-------|-------|------------------------|
| VPBAY | _____ | N42°16.17'/W070°49.48' |
| VPBLT | _____ | N42°19.67'/W070°53.40' |
| VPCGS | _____ | N42°22.08'/W071°03.13' |
| VPEVS | _____ | N42°23.52'/W071°04.10' |
| VPFEN | _____ | N42°12.58'/W071°08.88' |
| VPFRE | _____ | N42°25.03'/W071°12.32' |
| VPGVL | _____ | N42°21.88'/W070°52.18' |
| VPHAM | _____ | N42°30.13'/W071°07.15' |
| VPPIK | _____ | N42°20.37'/W071°15.93' |
| VPQUA | _____ | N42°12.10'/W071°04.78' |
| VPQUB | _____ | N42°12.60'/W070°59.83' |
| VPSPF | _____ | N42°24.20'/W071°09.47' |
| VPTOB | _____ | N42°31.42'/W070°59.82' |
| VPWAN | _____ | N42°36.88'/W071°19.45' |

BOSTON TERMINAL AREA CHART

| | | |
|--------|----------------------------|------------------------|
| VPCOH | COHASSET | N42°13.58'/W070°48.94' |
| VP CUT | CUTTYHUNK HARBOR | N41°25.50'/W070°55.03' |
| VPFRA | FRAMINGHAM SHOPPING CENTER | N42°18.16'/W071°23.65' |
| VP HOL | WOODS HOLE | N41°31.06'/W070°40.60' |
| VP HUL | HULL | N42°18.20'/W070°55.30' |
| VP LPT | NANTUCKET GREAT POINT | N41°23.41'/W070°02.78' |
| VP NED | NEEDHAM TOWERS | N42°18.51'/W071°14.64' |
| VP PEA | PEABODY SHOPPING CENTER | N42°32.52'/W070°56.69' |
| VP ROC | ROCKINGHAM RACE TRACK | N42°46.29'/W071°13.57' |
| VP SCI | SCITUATE | N42°11.89'/W070°43.69' |
| VP TPT | NANTUCKET THIRD POINT | N41°18.51'/W070°03.37' |
| VP TUC | TUCKERNUCK | N41°18.31'/W070°15.43' |
| VP WAK | WAKEFIELD | N42°30.72'/W071°05.24' |
| VP WAN | WANG TOWERS | N42°36.88'/W071°19.45' |

CHARLOTTE SECTIONAL CHART

| | | |
|--------|---------------|------------------------|
| VPATO | _____ | N34°37.37'/W076°31.47' |
| VPAVA | _____ | N34°57.00'/W077°16.50' |
| VPBFE | _____ | N32°16.38'/W080°47.50' |
| VPBRA | _____ | N36°13.75'/W076°08.08' |
| VP GCE | _____ | N36°03.90'/W076°36.42' |
| VP GHI | _____ | N35°15.30'/W075°31.25' |
| VP GIO | _____ | N35°32.50'/W076°37.33' |
| VP KJU | _____ | N35°26.58'/W076°10.22' |
| VP LMN | _____ | N34°55.43'/W077°46.42' |
| VP MAB | _____ | N34°42.20'/W077°03.50' |
| VP NPO | ISLE OF PALMS | N32°47.78'/W079°46.45' |
| VP OKY | _____ | N35°06.53'/W075°59.17' |
| VP REP | _____ | N32°33.98'/W080°21.82' |
| VP RRS | _____ | N33°25.45'/W079°07.60' |
| VP UMO | _____ | N35°35.63'/W075°28.08' |
| VP WZO | _____ | N36°00.87'/W075°40.07' |
| VP ZIE | _____ | N32°01.62'/W080°53.42' |

DENVER TERMINAL AREA CHART/FLYWAY CHART

| | | |
|-------|-------------------|-------------------------|
| VPBEN | _____ | N39°44.28' /W104°26.00' |
| VPFTG | _____ | N39°44.35' /W104°32.75' |
| VPNIC | NORTH INTERCHANGE | N39°58.90' /W104°59.27' |

HOUSTON TERMINAL AREA CHART/FLYWAY CHART

| WAYPOINT IDENT | COLLOCATED VFR CHECKPOINT | LOCATION |
|----------------|---------------------------|-------------------------|
| VPBWY | _____ | N29°46.25' /W095°09.24' |
| VPDTN | _____ | N29°46.59' /W095°22.01' |
| VPGLA | _____ | N30°08.32' /W095°06.62' |
| VPGLB | _____ | N30°07.80' /W094°55.70' |
| VPKTY | _____ | N29°47.05' /W095°44.92' |
| VPPLN | _____ | N30°08.80' /W095°50.42' |
| VPRSN | _____ | N29°30.00' /W095°41.00' |
| VPSND | _____ | N29°23.13' /W095°28.86' |
| VPSNT | _____ | N29°49.29' /W094°53.94' |
| VPTNE | _____ | N29°47.48' /W095°03.34' |
| VPTNW | _____ | N29°47.06' /W095°33.81' |
| VPTRK | _____ | N29°24.06' /W095°10.44' |

JACKSONVILLE SECTIONAL CHART

| | | |
|-------|------------------|-------------------------|
| VPAFI | _____ | N31°49.35' /W081°51.07' |
| VPAFY | _____ | N30°07.00' /W081°21.33' |
| VPBEC | _____ | N29°46.25' /W081°15.10' |
| VPCJA | _____ | N29°30.00' /W081°06.00' |
| VPCKY | _____ | N28°46.50' /W082°34.00' |
| VPCNY | _____ | N28°30.00' /W080°45.00' |
| VPDAD | DADE CITY | N28°22.57' /W082°11.25' |
| VPDAR | _____ | N31°22.38' /W081°24.13' |
| VPDFI | _____ | N29°00.17' /W081°20.85' |
| VPDUT | _____ | N27°37.70' /W082°09.10' |
| VPEAR | CLEARWATER BEACH | N27°58.67' /W082°49.83' |
| VPEGV | _____ | N29°39.97' /W081°24.87' |
| VPFFU | _____ | N28°57.08' /W081°00.33' |
| VPGPE | ST PETE BEACH | N27°43.50' /W082°44.67' |
| VPHAA | _____ | N30°04.02' /W083°40.02' |
| VPHUC | _____ | N28°19.87' /W082°43.77' |
| VPIWA | MIDWAY | N31°48.33' /W081°25.85' |
| VPJMY | _____ | N29°26.92' /W081°18.27' |
| VPKER | LAKE PARKER | N28°04.00' /W081°56.00' |
| VPLEV | _____ | N28°48.00' /W080°52.00' |
| VPLJA | _____ | N29°00.00' /W080°51.00' |
| VPMAI | _____ | N30°50.02' /W084°56.63' |
| VPTLH | _____ | N30°32.70' /W083°52.22' |
| VPXZY | _____ | N29°35.00' /W083°10.00' |
| VPYIW | _____ | N30°42.28' /W081°27.25' |
| VPZIE | _____ | N32°01.62' /W080°53.42' |

KANSAS CITY SECTIONAL CHART

| | | |
|-------|-------|-------------------------|
| VPAGO | _____ | N37°50.33' /W090°29.03' |
| VPBEK | _____ | N37°15.07' /W092°30.67' |
| VPDEN | _____ | N37°46.75' /W092°19.20' |
| VPENE | _____ | N37°44.75' /W091°55.78' |
| VPESS | _____ | N36°59.48' /W091°00.88' |
| VPFME | _____ | N37°41.00' /W092°38.33' |
| VPGXY | _____ | N37°15.50' /W091°40.17' |
| VPMBE | _____ | N37°11.08' /W090°27.92' |
| VPMKE | _____ | N37°24.47' /W092°40.00' |
| VPROV | _____ | N38°01.72' /W091°12.81' |
| VPUTT | _____ | N37°52.05' /W092°01.20' |

| 390 | VFR WAYPOINTS | |
|----------------|--|------------------------|
| WAYPOINT IDENT | COLLOCATED VFR CHECKPOINT | LOCATION |
| VPWOC | | N37°18.03' /W092°18.63 |
| VPWRO | | N37°39.12' /W091°45.68 |
| VPXIZ | | N37°26.60' /W092°05.42 |
| | KANSAS CITY TERMINAL AREA CHART | |
| VPATN | ATCHISON | N39°33.62' /W095°07.65 |
| VPBGS | BLUE SPRINGS | N39°01.82' /W094°16.32 |
| VPBSP | BONNER SPRINGS | N39°03.78' /W094°53.10 |
| VPCHB | CHOUTEAU BRIDGE | N39°08.77' /W094°32.03 |
| VPDSO | DE SOTO | N38°58.68' /W094°58.48 |
| VPESG | EXCELSIOR SPRINGS | N39°20.68' /W094°13.77 |
| VPGTB | GARRETSBURG | N39°40.92' /W094°41.45 |
| VPLAT | LATHROP WATER TANK | N39°32.87' /W094°20.00 |
| VPLEN | LENEXA | N38°57.77' /W094°43.68 |
| VPLVL | LONGVIEW LAKE | N38°54.63' /W094°28.28 |
| VPMCL | MC LOUTH | N39°11.65' /W095°12.50 |
| VPNHA | NASHUA | N39°17.83' /W094°34.80 |
| VPSCX | SPORTS COMPLEX | N39°03.00' /W094°29.02 |
| VPSKR | SUGAR CREEK REFINERY | N39°07.00' /W094°27.02 |
| VPSPK | SWOPE PARK | N39°00.47' /W094°31.93 |
| VPTSK | TWIN STACKS | N39°09.05' /W094°38.22 |
| VPWOF | WORLDS OF FUN | N39°10.42' /W094°29.12 |
| | KLAMATH FALLS SECTIONAL CHART | |
| VPORO | | N43°57.38' /W123°02.22 |
| | LOS ANGELES HELICOPTER CHART | |
| VPANA | | N33°44.43' /W117°50.03 |
| VPART | MAGNOLIA | N33°51.45' /W117°58.92 |
| VPAUT | HWY 91 & 55 | N33°50.63' /W117°49.57 |
| VPBOB | | N33°59.60' /W117°21.45 |
| VPCAR | | N33°49.90' /W118°17.23 |
| VPCNG | CONEJO GRADE US HWY 101 | N34°12.54' /W118°59.61 |
| VPCOR | | N33°52.90' /W117°32.95 |
| VPCRX | | N34°01.40' /W117°44.88 |
| VPCSU | CSU CHANNEL ISLANDS | N34°09.76' /W119°02.53 |
| VPDOW | | N33°56.47' /W118°05.80 |
| VPELA | | N34°00.98' /W118°10.35 |
| VPETY | | N33°38.70' /W117°44.12 |
| VPFCB | | N34°02.03' /W118°01.63 |
| VPFPL | OXNARD FINANCIAL PLAZA | N34°13.71' /W119°10.39 |
| VPGOL | | N34°09.33' /W118°17.37 |
| VPIMP | | N33°55.85' /W118°16.85 |
| VPKAT | | N33°48.23' /W117°54.22 |
| VPKEL | | N34°03.92' /W117°48.40 |
| VPLAC | | N34°03.75' /W118°14.93 |
| VPLLU | | N34°03.85' /W117°17.82 |
| VPLQM | QUEEN MARY | N33°45.17' /W118°11.37 |
| VPLRT | SANTA ANITA RACE TRACK | N34°08.45' /W118°02.65 |
| VPLVT | VINCENT THOMAS BRIDGE | N33°44.97' /W118°16.32 |
| VPMDR | | N33°59.27' /W118°23.97 |
| VPNEW | NEWHALL PASS | N34°20.18' /W118°30.72 |
| VPNUY | | N34°09.63' /W118°28.18 |
| VPPCH | | N33°28.07' /W117°40.32 |
| VPPKC | | N34°03.32' /W118°12.83 |
| VPPOR | | N34°00.10' /W117°50.12 |
| VPRRT | | N33°59.37' /W118°16.83 |
| VPSEP | | N34°05.80' /W118°28.63 |
| VPSFR | | N34°17.45' /W118°28.07 |
| VPSTC | SATICOY BRIDGE | N34°16.62' /W119°08.34 |
| VPSTK | | N34°13.97' /W118°24.60 |
| | NC. 23 SEP 2010 to 18 NOV 2010 | |

LOS ANGELES SECTIONAL CHART

| WAYPOINT IDENT | COLLOCATED VFR CHECKPOINT | LOCATION |
|----------------|---------------------------|--------------------------|
| VPCNG | CONEJO GRADE US HWY 101 | N34°12.54' / W118°59.61' |
| VPCSU | CSU CHANNEL ISLANDS | N34°09.76' / W119°02.53' |
| VPFPL | OXNARD FINANCIAL PLAZA | N34°13.71' / W119°10.39' |
| VPSTC | SATICOY BRIDGE | N34°16.62' / W119°08.34' |

LOS ANGELES TERMINAL AREA CHART/FLYWAY CHART

| | | |
|-------|---------------------------|--------------------------|
| VPCNG | CONEJO GRADE US HWY 101 | N34°12.54' / W118°59.61' |
| VPCSU | CSU CHANNEL ISLANDS | N34°09.76' / W119°02.53' |
| VPGTY | GETTY CENTER | N34°04.84' / W118°28.66' |
| VPLBP | BANNING PASS | N33°56.05' / W116°59.63' |
| VPLCC | CHAFFEY COLLEGE | N34°08.87' / W117°34.33' |
| VPLCP | CAJON PASS | N34°18.07' / W117°27.68' |
| VPLDL | DISNEYLAND | N33°48.72' / W117°55.13' |
| VPLDP | DANA POINT | N33°27.62' / W117°42.87' |
| VPLDS | DODGER STADIUM | N34°04.42' / W118°14.42' |
| VPLFX | 91/605 INTERCHANGE | N33°52.38' / W118°06.08' |
| VPLGP | GRIFFITH PARK OBSERVATORY | N34°07.10' / W118°18.02' |
| VPLHF | 110/405 FWYS | N33°51.42' / W118°17.10' |
| VPLHP | HUNTINGTON PIER | N33°39.32' / W118°00.25' |
| VPLKH | KING HARBOR | N33°50.75' / W118°23.88' |
| VPLLC | L.A. COLISEUM | N34°00.83' / W118°17.27' |
| VPLLM | LAKE MATHEWS | N33°50.58' / W117°26.85' |
| VPLMM | MAGIC MOUNTAIN | N34°26.20' / W118°36.28' |
| VPLMS | MILE SQUARE PARK | N33°43.40' / W117°56.77' |
| VPLPD | PRADO DAM | N33°53.40' / W117°38.48' |
| VPLPP | PACIFIC PALISADES | N34°02.13' / W118°32.15' |
| VPLQM | QUEEN MARY | N33°45.17' / W118°11.37' |
| VPLRB | ROSE BOWL | N34°09.67' / W118°10.05' |
| VPLRT | SANTA ANITA RACE TRACK | N34°08.45' / W118°02.65' |
| VPLSA | SANTA ANA CANYON | N33°52.03' / W117°42.68' |
| VPLSB | SANTA FE FLOOD BASIN | N34°07.72' / W117°57.30' |
| VPLSC | STATE COLLEGE | N33°52.97' / W117°53.13' |
| VPLSF | SAN FERNANDO RESERVOIR | N34°17.87' / W118°29.00' |
| VPLSP | SIGNAL PEAK | N33°36.33' / W117°48.63' |
| VPLSR | HAWTHORNE & 405 FREEWAY | N33°53.07' / W118°21.13' |
| VPLSS | SANTA SUSANA PASS | N34°16.00' / W118°38.43' |
| VPLTW | TUJUNGA WASH & FOOTHILL | N34°16.40' / W118°20.30' |
| VPLVT | VINCENT THOMAS BRIDGE | N33°44.97' / W118°16.32' |
| VPLWT | WATER TANK | N34°10.82' / W118°46.27' |
| VPNEW | NEWHALL PASS | N34°20.18' / W118°30.72' |
| VPSTC | SATICOY BRIDGE | N34°16.62' / W119°08.34' |

MIAMI SECTIONAL CHART

| | | |
|-------|-------------------|--------------------------|
| VPACH | HOLLYWOOD BEACH | N26°00.92' / W080°06.93' |
| VPBOV | _____ | N27°57.00' / W080°46.75' |
| VPCLC | _____ | N26°27.07' / W082°00.88' |
| VPCTE | _____ | N26°09.28' / W081°20.70' |
| VPDAD | DADE CITY | N28°22.57' / W082°11.25' |
| VPDUT | _____ | N27°37.70' / W082°09.10' |
| VPDZE | _____ | N27°19.00' / W080°44.17' |
| VPEAR | CLEARWATER BEACH | N27°58.67' / W082°49.83' |
| VPEDY | ANDYTOWN TOLLGATE | N26°08.78' / W080°28.00' |
| VPFAH | _____ | N26°25.40' / W081°29.67' |
| VPGPE | ST PETE BEACH | N27°43.50' / W082°44.67' |
| VPHRO | _____ | N27°05.97' / W082°12.20' |
| VPHUC | _____ | N28°19.87' / W082°43.77' |
| VPIBR | _____ | N27°12.47' / W081°40.22' |
| VPKER | LAKE PARKER | N28°04.00' / W081°56.00' |
| VPKOE | _____ | N24°40.08' / W081°20.55' |
| VPLYY | _____ | N24°49.07' / W080°49.17' |
| VPMB0 | GULFSTREAM PARK | N25°58.57' / W080°08.17' |
| VPOBA | PUMPING STATION | N26°28.30' / W080°26.75' |
| VPRBI | _____ | N25°50.67' / W080°55.18' |
| VPRNL | RANGER STATION | N25°22.92' / W080°36.58' |
| VPWMO | _____ | N27°03.00' / W080°35.00' |

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VFR WAYPOINTS

MIAMI TERMINAL AREA CHART/FLYWAY CHART

| WAYPOINT IDENT | COLLOCATED VFR CHECKPOINT | LOCATION |
|----------------|---------------------------|------------------------|
| VPACH | HOLLYWOOD BEACH | N26°00.92' /W080°06.93 |
| VPEDY | ANDYTOWN TOLLGATE | N26°08.78' /W080°28.00 |
| VPMBO | GULFSTREAM PARK | N25°58.57' W080°08.17' |
| VPOBA | PUMPING STATION | N26°28.30' /W080°26.75 |
| VPRBI | _____ | N25°50.67' /W080°55.18 |
| VPRNL | RANGER STATION | N25°22.92' /W080°36.58 |

NEW ORLEANS SECTIONAL CHART

| | | |
|-------|----------------|------------------------|
| VPGPT | _____ | N30°25.95' /W089°05.62 |
| VPLIP | PHILLIPS INLET | N30°16.23' /W085°59.25 |
| VPMAI | _____ | N30°50.02' /W084°56.63 |
| VPMOB | _____ | N30°23.00' /W088°31.72 |
| VPRAM | _____ | N30°18.95' /W089°35.88 |
| VPRER | _____ | N30°13.87' /W085°20.67 |
| VPRIV | _____ | N30°54.85' /W087°57.82 |
| VPSAW | _____ | N30°49.65' /W089°07.42 |
| VPTHR | _____ | N30°19.93' /W087°08.50 |

NEW YORK HELICOPTER CHART

| | | |
|-------|-------|------------------------|
| VPJAY | _____ | N40°59.00' /W073°07.00 |
| VPLYD | _____ | N40°57.37' /W073°29.59 |
| VPROK | _____ | N40°52.70' /W073°44.24 |

PHOENIX TERMINAL AREA CHART/FLYWAY CHART

| | | |
|-------|---------------------------|------------------------|
| VPALL | ALLENVILLE | N33°20.97' /W112°35.20 |
| VPAQU | AQUEDUCT PUMPING STATION | N33°40.05' /W112°41.38 |
| VPARM | ARROWHEAD MALL | N33°38.52' /W112°13.48 |
| VPAWG | AHWATUKEE GOLF COURSE | N33°19.98' /W111°59.08 |
| VPAZM | ARIZONA MILLS | N33°23.43' /W111°57.88 |
| VPBAR | BARTLETT DAM | N33°49.10' /W111°37.92 |
| VPCCC | COUNTRY CLUB & CANAL | N33°30.73' /W111°50.37 |
| VPCNL | CANAL | N33°33.23' /W111°46.89 |
| VPFRB | FIREBIRD LAKE | N33°16.35' /W111°58.10 |
| VPFTN | FOUNTAIN HILLS | N33°36.12' /W111°42.72 |
| VPGLX | GILA CROSSING | N33°16.55' /W112°10.08 |
| VPGPP | GLENDALE POWER PLANT | N33°33.27' /W112°13.00 |
| VPMAR | MARICOPA | N33°03.42' /W112°02.88 |
| VPMHS | MESQUITE HIGH SCHOOL | N33°20.53' /W111°49.58 |
| VPNRV | NEW RIVER | N33°55.08' /W112°08.45 |
| VPNTT | NORTH TEST TRACK | N33°03.50' /W111°55.83 |
| VPPIR | PIR | N33°22.52' /W112°18.90 |
| VPQTR | QUINTERO GOLF COURSE | N33°49.53' /W112°23.58 |
| VPRVC | RIO VERDE COMMUNITY | N33°44.37' /W111°39.62 |
| VPSMC | SOUTH MOUNTAIN COLLEGE | N33°23.02' /W112°02.12 |
| VPSQP | SQUAW PEAK | N33°32.83' /W112°01.27 |
| VPSSS | SUPERSTITION SPRINGS MALL | N33°23.50' /W111°41.37 |
| VPSTN | SANTAN MOUNTAINS | N33°09.23' /W111°40.92 |
| VPSTT | SOUTH TEST TRACK | N32°56.25' /W111°59.67 |
| VPZZZ | _____ | N33°20.18' /W111°26.53 |

ST LOUIS TERMINAL AREA CHART/FLYWAY CHART

| | | |
|-------|---------------------------|------------------------|
| VPAGN | TV ANTENNA | N38°32.08' /W090°22.42 |
| VPBPE | _____ | N38°23.80' /W090°20.38 |
| VPCJY | HOLIDAY SHORES | N38°55.00' /W089°56.00 |
| VPCOJ | WINFIELD DAM | N39°00.28' /W090°41.23 |
| VPDFA | JEFFERSON BARRACKS BRIDGE | N38°29.18' /W090°16.47 |
| VPEAZ | BUSCH STADIUM | N38°37.43' /W090°11.55 |
| VPEDZ | WATER TANKS | N38°45.30' /W090°34.87 |
| VPEGR | GAS TANKS | N38°35.80' /W090°19.32 |
| VPEOX | ST PETERS | N38°47.17' /W090°39.25 |

| WAYPOINT IDENT | COLLOCATED VFR CHECKPOINT | LOCATION |
|----------------|---------------------------|--------------------------|
| VPFAI | HOWELL ISLAND | N38°40.00' / W090°43.00' |
| VPFFY | _____ | N38°55.37' / W090°17.30' |
| VPGPF | _____ | N38°35.60' / W090°26.92' |
| VPGVI | _____ | N38°32.30' / W090°27.80' |
| VPHRQ | CHAIN OF ROCKS BRIDGE | N38°45.88' / W090°10.42' |
| VPIBO | WATERLOO | N38°20.00' / W090°09.00' |
| VPJMU | HORSESHOE LAKE | N38°41.00' / W090°05.00' |
| VPKNY | PACIFIC | N38°29.00' / W090°44.00' |
| VPLES | ST CHARLES | N38°47.00' / W090°30.00' |
| VPLIW | SIX FLAGS | N38°30.67' / W090°40.47' |
| VPLXU | GATEWAY ARCH | N38°37.50' / W090°11.00' |
| VPNSY | WOOD RIVER REFINERIES | N38°50.00' / W090°05.00' |
| VPNZY | WENTZVILLE | N38°48.83' / W090°50.98' |
| VPRAZ | JERSEYVILLE | N39°07.00' / W090°20.00' |
| VPRMO | FOREST PARK | N38°38.00' / W090°17.00' |
| VPWKO | COLUMBIA | N38°27.00' / W090°12.00' |
| VPXXI | MILLSTADT | N38°27.50' / W090°05.68' |
| VPYID | MOSENTHEIN ISLAND | N38°43.00' / W090°12.25' |

SALT LAKE CITY HELICOPTER CHART

| | | |
|--------|-----------------------|--------------------------|
| VPAIR | SALTAIR | N40°44.85' / W112°11.22' |
| VPBEE | SOUTH INTERCHANGE | N40°38.18' / W111°54.23' |
| VPBRN | BARN | N40°54.28' / W112°10.15' |
| VPCAP | STATE CAPITOL | N40°46.67' / W111°53.25' |
| VPCHS | _____ | N40°42.28' / W112°05.92' |
| VPCOP | BINGHAM COPPER MINE | N40°31.38' / W112°09.00' |
| VPCWY | CAUSEWAY | N41°05.37' / W112°07.17' |
| VPCYN | PARLEYS CANYON | N40°42.67' / W111°48.10' |
| VPFPC | FREE PORT CENTER | N41°05.92' / W112°02.27' |
| VPFPK | FRANCIS PEAK | N41°01.98' / W111°50.30' |
| VPGFS | GARFIELD STACK | N40°43.28' / W112°11.88' |
| VPHVE | SPAGHETTI BOWL | N40°43.50' / W111°54.22' |
| VPJRT | JORDAN RIVER TEMPLE | N40°35.02' / W111°55.58' |
| VPKSL | KSL ANTENNA | N40°46.80' / W112°05.80' |
| VPLGN | LAGOON AMUSEMENT PARK | N40°59.08' / W111°53.57' |
| VPMDH | MCKAY DEE HOSPITAL | N41°11.50' / W111°57.08' |
| VPMMT | MICROWAVE TOWERS | N40°48.50' / W111°53.37' |
| VPMSh | _____ | N41°01.67' / W112°02.47' |
| VPNSL | _____ | N40°50.15' / W111°54.90' |
| VPNTP | _____ | N41°03.57' / W112°14.23' |
| VPOGE | GRAIN ELEVATOR | N41°13.13' / W112°00.45' |
| VPOPS | POWER STATION | N41°20.38' / W112°02.78' |
| VPPEP | STATE PRISON | N40°29.88' / W111°53.62' |
| VPPTT | PROMONTORY POINT | N41°12.28' / W112°25.73' |
| VPPTM | POINT OF THE MOUNTAIN | N40°27.42' / W111°54.83' |
| VPVVO | PROVO CANYON | N40°18.77' / W111°39.45' |
| VPRWY | _____ | N40°48.48' / W112°00.33' |
| VPSLC | I-15/I-80 INTERCHANGE | N40°45.83' / W111°54.85' |
| VP TIP | SOUTH TIP | N40°50.93' / W112°10.92' |
| VPWBR | WEBER CANYON | N41°08.17' / W111°54.83' |
| VPWBT | _____ | N40°38.00' / W112°03.33' |

SALT LAKE CITY TERMINAL AREA CHART/FLYWAY CHART

| | | |
|-------|-------------------------|--------------------------|
| VPAIR | SALTAIR | N40°44.85' / W112°11.22' |
| VPBEE | SOUTH INTERCHANGE | N40°38.18' / W111°54.23' |
| VPBRN | BARN | N40°54.28' / W112°10.15' |
| VPCAP | STATE CAPITOL | N40°46.67' / W111°53.25' |
| VPCHS | _____ | N40°42.28' / W112°05.92' |
| VPCOP | BINGHAM COPPER MINE | N40°31.38' / W112°09.00' |
| VPCVI | CENTERVILLE INTERCHANGE | N40°55.30' / W111°53.43' |
| VPCWY | CAUSEWAY | N41°05.37' / W112°07.17' |
| VPCYN | PARLEYS CANYON | N40°42.67' / W111°48.10' |
| VPFPC | FREE PORT CENTER | N41°05.92' / W112°02.27' |
| VPFPK | FRANCIS PEAK | N41°01.98' / W111°50.30' |
| VPGFS | GARFIELD STACK | N40°43.28' / W112°11.88' |

| 394 | | | VFR WAYPOINTS | | |
|----------------|---------------------------|------------------------|---------------|--|--|
| WAYPOINT IDENT | COLLOCATED VFR CHECKPOINT | LOCATION | | | |
| VPHVE | SPAGHETTI BOWL | N40°43.50' /W111°54.22 | | | |
| VPJRT | JORDAN RIVER TEMPLE | N40°35.02' /W111°55.58 | | | |
| VPKSL | KSL ANTENNA | N40°46.80' /W112°05.80 | | | |
| VPLGN | LAGOON AMUSEMENT PARK | N40°59.08' /W111°53.57 | | | |
| VPMDH | MCKAY DEE HOSPITAL | N41°11.50' /W111°57.08 | | | |
| VPMMT | MICROWAVE TOWERS | N40°48.50' /W111°53.37 | | | |
| VPMSH | | N41°01.67' /W112°02.47 | | | |
| VPNSL | | N40°50.15' /W111°54.90 | | | |
| VPNTP | | N41°03.57' /W112°14.23 | | | |
| VPOGE | GRAIN ELEVATOR | N41°13.13' /W112°00.45 | | | |
| VPOPS | POWER STATION | N41°20.38' /W112°02.78 | | | |
| VPPEN | STATE PRISON | N40°29.88' /W111°53.62 | | | |
| VPPPT | PROMONTORY POINT | N41°12.28' /W112°25.73 | | | |
| VPPTM | POINT OF THE MOUNTAIN | N40°27.42' /W111°54.83 | | | |
| VPPVO | PROVO CANYON | N40°18.77' /W111°39.45 | | | |
| VPRWY | | N40°48.48' /W112°00.33 | | | |
| VPSLC | I-15/I-80 INTERCHANGE | N40°45.83' /W111°54.85 | | | |
| VPTIP | SOUTH TIP | N40°50.93' /W112°10.92 | | | |
| VPUOU | U OF U EVENTS CENTER | N40°45.73' /W111°50.28 | | | |
| VPWBR | WEBER CANYON | N41°08.17' /W111°54.83 | | | |
| VPWBT | | N40°38.00' /W112°03.33 | | | |
| VPZOO | HOGLE ZOO | N40°45.00' /W111°48.95 | | | |

SAN DIEGO TERMINAL AREA CHART/FLYWAY CHART

| | | |
|--------|--------------------------|------------------------|
| VPLDP | DANA POINT | N33°27.62' /W117°42.87 |
| VPLSP | SIGNAL PEAK | N33°36.33' /W117°48.63 |
| VPOCN | | N33°14.15' /W117°26.63 |
| VPSBC | BARONA CASINO | N32°56.25' /W116°52.60 |
| VPSBL | | N33°05.18' /W117°18.55 |
| VPSBM | BLACK MOUNTAIN | N32°58.87' /W117°07.00 |
| VPSCF | | N32°48.55' /W117°09.17 |
| VPSCM | COWLES MOUNTAIN | N32°48.72' /W117°01.97 |
| VPSCP | CRYSTAL PIER | N32°47.77' /W117°15.42 |
| VPSCR | | N32°39.37' /W117°07.30 |
| VPSFB | IRON MOUNTAIN | N32°58.25' /W116°57.33 |
| VPSLJ | LAKE JENNINGS | N32°51.53' /W116°53.28 |
| VPSMB | | N32°45.57' /W117°12.22 |
| VPSMP | | N33°22.70' /W117°36.75 |
| VPSMS | MOUNT SOLEDAD | N32°50.40' /W117°15.10 |
| VPSMV | | N32°45.75' /W117°09.80 |
| VPSMW | MOUNT WOODSON | N33°00.52' /W116°58.23 |
| VP SOP | OTAY MESA PRISON | N32°35.82' /W116°55.28 |
| VP SOT | LOWER OTAY LAKE | N32°37.73' /W116°55.38 |
| VP SPL | SOUTH POINT LOMA | N32°39.90' /W117°14.55 |
| VP SPP | POWER PLANT | N33°08.25' /W117°20.23 |
| VP SQS | QUALCOMM STADIUM | N32°46.98' /W117°07.23 |
| VP SRT | DEL MAR RACE TRACK | N32°58.58' /W117°15.95 |
| VP SSM | SAN MIGUEL MOUNTAIN | N32°41.78' /W116°56.18 |
| VP SSV | SAN VICENTE ISLAND | N32°55.53' /W116°55.00 |
| VP STP | TORREY PINES GOLF COURSE | N32°54.17' /W117°14.68 |
| VP SVA | | N33°11.48' /W117°16.38 |

SAN FRANCISCO SECTIONAL CHART

| | | |
|-------|-----------------|------------------------|
| VPKBG | KINGSBURY GRADE | N38°58.75' /W119°53.20 |
|-------|-----------------|------------------------|

SAN FRANCISCO TERMINAL AREA CHART/FLYWAY CHART

| | | |
|-------|--------------------------|------------------------|
| VPALT | ALTAMONT PASS | N37°44.35' /W121°35.42 |
| VPANT | ANTIOCH BRIDGE | N38°01.45' /W121°45.02 |
| VPBBR | BENICIA BRIDGE | N38°02.50' /W122°07.45 |
| VPCAL | CALAVERAS RESERVOIR | N37°28.16' /W121°48.93 |
| VPCBT | LAKE CHABOT | N37°43.68' /W122°06.94 |
| VPCOY | COYOTE HILLS | N37°32.50' /W122°05.06 |
| VPCQZ | CARQUINEZ BRIDGE | N38°03.66' /W122°13.52 |
| VPCRL | | N37°11.00' /W121°41.06 |
| VPCRY | CRYSTAL SPRINGS CAUSEWAY | N37°30.56' /W122°21.10 |

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| WAYPOINT IDENT | COLLOCATED VFR CHECKPOINT | LOCATION |
|----------------|---------------------------|-------------------------|
| VPCSH | CAL STATE UNIVERSITY | N37°39.52' /W122°03.52' |
| VPDAM | DEL VALLE DAM | N37°36.91' /W121°44.78' |
| VPDLR | | N37°07.00' /W121°47.06' |
| VPDUB | DUBLIN | N37°42.06' /W121°55.36' |
| VPEMB | EMBASSY SUITES | N37°26.05' /W121°53.83' |
| VPGGF | GOLDEN GATE FIELDS | N37°53.07' /W122°18.71' |
| VPGIL | GILROY | N37°01.37' /W121°33.99' |
| VPHHH | HAMILTON | N38°03.58' /W122°30.66' |
| VPKGO | KGO | N37°31.58' /W122°06.10' |
| VPLEX | LEXINGTON RESERVOIR | N37°11.66' /W121°59.18' |
| VPMD | MID-SPAN SAN MATEO BRIDGE | N37°36.28' /W122°11.81' |
| VP MOR | MORMON TEMPLE | N37°48.46' /W122°11.95' |
| VPNUM | NUMMI PLANT | N37°29.56' /W121°56.58' |
| VPPAC | | N37°38.00' /W122°32.07' |
| VP PRU | PRUNEYARD | N37°17.33' /W121°56.01' |
| VPSAR | SARATOGA | N37°15.26' /W122°02.33' |
| VPSLA | SLAC/LINEAR ACCELERATOR | N37°24.75' /W122°14.35' |
| V PSTB | STINSON BEACH | N37°54.45' /W122°40.41' |
| VPSUN | SUNOL GOLF COURSE | N37°34.85' /W121°53.23' |
| VPUTC | U.T.C. | N37°13.93' /W121°41.35' |
| VPWAL | WALNUT CREEK | N37°53.78' /W122°04.30' |
| VPWAM | | N37°30.28' /W122°10.00' |
| VPWFR | CEMENT PLANT | N37°30.88' /W122°12.26' |

TAMPA/ORLANDO TERMINAL AREA CHART/FLYWAY CHART

| | | |
|--------|------------------|-------------------------|
| VPBOV | | N27°57.00' /W080°46.75' |
| VPCNY | | N28°30.00' /W080°45.00' |
| VPDAD | DADE CITY | N28°22.57' /W082°11.25' |
| VPDFI | | N29°00.17' /W081°20.85' |
| VPDUT | | N27°37.70' /W082°09.10' |
| VPEAR | CLEARWATER BEACH | N27°58.67' /W082°49.83' |
| VPFFU | | N28°57.08' /W081°00.33' |
| VP GPE | ST PETE BEACH | N27°43.50' /W082°44.67' |
| VPHUC | | N28°19.87' /W082°43.77' |
| VPKER | LAKE PARKER | N28°04.00' /W081°56.00' |
| VPLEV | | N28°48.00' /W080°52.00' |
| VPLJA | | N29°00.00' /W080°51.00' |

WASHINGTON SECTIONAL CHART

| | | |
|--------|--|-------------------------|
| VSPACE | | N38°07.82' /W076°48.75' |
| VPAXI | | N38°34.57' /W076°20.38' |
| VPBRA | | N36°13.75' /W076°08.08' |
| VP GCE | | N36°03.90' /W076°36.42' |
| VPWZO | | N36°00.87' /W075°40.07' |

VOR RECEIVER CHECKPOINTS AND VOR TEST FACILITIES (VOT)

The use of VOR airborne and ground checkpoints is explained in Aeronautical Information Manual, Basic Flight Information and ATC Procedures.

NOTE: Under columns headed "Type of Checkpoint" & "Type of VOT Facility" G stands for ground. A/ stands for airborne followed by figures (2300) or (1000-3000) indicating the altitudes above mean sea level at which the check should be conducted. Facilities are listed in alphabetical order, in the state where the checkpoints or VOTs are located.

IOWA

VOR RECEIVER CHECKPOINTS

| Facility Name (Arpt Name) | Freq/Ident | Type Check Pt. Gnd. AB/ALT | Azimuth from Fac. Mag | Dist. from Fac. N.M. | Checkpoint Description |
|---|------------|--|--------------------------------|-------------------------------|---|
| Burlington (Southeast Iowa Rgnl) | 111.4/BRL | A/2500 | 288 | 9.6 | Over intersection of Rwy 18-36 and 12-30. |
| Cedar Rapids (The Eastern Iowa) | 114.1/CID | G | 086 | 3.9 | On runup pad Rwy 27. |
| | 114.1/CID | G | 087 | 2.6 | On runup pad Rwy 09. |
| | 114.1/CID | G | 092 | 4 | On runup pad Rwy 31. |
| Dubuque (Dubuque Rgnl) | 115.8/DBQ | G | 109 | 0.5 | Apch end Rwy 31. |
| Fort Dodge (Fort Dodge Rgnl) | 113.5/FOD | G | 118 | 6.1 | On W edge of terminal ramp. |
| Iowa City (Iowa City Municipal) | 116.2/IOW | A/2000 | 019 | 8 | Over rotg beacon. |
| Newton (Newton Muni) | 112.5/TNU | A/2500 | 145 | 8 | Over apch end Rwy 32. |
| Ottumwa (Ottumwa Rgnl) | 111.6/OTM | A/2500 | 303 | 7.3 | Over intersection of Rwy 13-31 and 04-22. |
| Sheldon (Sheldon Muni) | 108.6/DDI | A/2700 | 098 | 8.0 | Over grain elevator in city of Sanborn. |
| Spencer (Spencer Muni) | 110.0/SPW | G | 316 | 0.7 | On painted circle on twy AER 12. |
| Waterloo (Waterloo Muni) | 112.2/ALO | G | 304 | 0.8 | Twy B apch end Rwy 12. |

VOR TEST FACILITIES (VOT)

| Facility Name (Airport Name) | Freq. | Type VOT Facility | Remarks |
|---------------------------------|-------|----------------------|---------|
| Davenport Muni | 111.8 | G | |
| Des Moines Intl. | 109.2 | G | |

KANSAS

VOR RECEIVER CHECKPOINTS

| Facility Name (Arpt Name) | Freq/Ident | Type Check Pt. Gnd. AB/ALT | Azimuth from Fac. Mag | Dist. from Fac. N.M. | Checkpoint Description |
|---|------------|--|--------------------------------|-------------------------------|--|
| Chanute (Chanute Martin Johnson) | 109.2/CNU | A/2000 | 058 | 5.6 | Over center of N/S rwy. |
| Emporia (Emporia Muni) | 112.8/EMP | A/2700 | 320 | 9.0 | Over intersection of Hwy 50 and I-35. |
| Fort Riley (Marshall AAF) | 109.4/FRI | G | 032 | 6.8 | On parking ramp adjacent to radar antenna. |

| VOR RECEIVER CHECK | | | | | | 397 |
|--|------------|--|--------------------------------|-------------------------------|--|-----|
| Facility Name (Arpt Name) | Freq/Ident | Type Check Pt. Gnd. AB/ALT | Azimuth from Fac. Mag | Dist. from Fac. N.M. | Checkpoint Description | |
| Garden City (Garden City Rgnl) | 113.3/GCK | G | 359 | 1.0 | Intersection of Twys A and D. | |
| Goodland (Renner Fld/Goodland Muni) | 115.1/GLD | G | 201 | 1.2 | On parking ramp in front of air terminal. | |
| Hays | 110.4/HYS | A/3000 | 071 | 12.2 | Over grain elevator in Gorham. | |
| Hill City (Hill City Muni) | 113.7/HLC | A/4200 | 060 | 19.6 | Over rotg bcn. | |
| Hutchinson (Hutchinson Rgnl) | 116.8/HUT | A/3500 | 033 | 5 | Over apch end Rwy 04. | |
| Manhattan | 110.2/MHK | A/2500 | 054 | 3.9 | Over water twr. | |
| Manhattan (Manhattan Rgnl) | 110.2/MHK | G | 197 | 0.6 | 0.6 NM parallel twy at B intersection. | |
| | 110.2/MHK | G | 201 | 0.9 | Twy at Rwy 3 holdline. | |
| Salina (Salina Muni) | 117.1/SLN | G | 180 | 7.8 | On twy north of Twy E. | |
| Topeka (Philip Billard Muni)..... | 117.8/TOP | G | 215 | 5.6 | East side of terminal ramp. | |
| Wichita (Wichita Mid–Continent) | 113.8/ICT | A/3500 | 216 | 7.1 | Over grain elevator. SW corner of Garden Plains. | |

VOR TEST FACILITIES (VOT)

| Facility Name (Airport Name) | Freq. | Type VOT Facility | Remarks |
|--|-------|----------------------|---------|
| Topeka (Forbes Fld) | 111.0 | G | |
| Wichita (Wichita Mid-Continent) | 114.0 | G | |

MINNESOTA

VOR RECEIVER CHECKPOINTS

| Facility Name (Arpt Name) | Freq/Ident | Type Check Pt. Gnd. AB/ALT | Azimuth from Fac. Mag | Dist. from Fac. N.M. | Checkpoint Description | |
|---|------------|--|--------------------------------|-------------------------------|--|--|
| Albert Lea (Albert Lea Muni)..... | 109.8/AEL | G | 140 | .5 | Apch end Rwy 34. | |
| Alexandria (Chandler Fld) | 112.8/AXN | A/2600 | 224 | 8.3 | Over apch end Rwy 22. | |
| Baudette (Baudette Intl) | 111.6/BDE | A/2000 | 277 | 13.8 | Over grain elevator Williams, MN. | |
| Baudette (Baudette Intl) | 111.6/BDE | G | 310 | .8 | Rwy 12 runup pad. | |
| Detroit Lakes (Detroit Lakes–Wething Fld) .. | 111.2/DTL | A/3000 | 132 | 19 | Over grain elevator in Perham Mn. | |
| Duluth (Duluth Intl) | 112.6/DLH | G | 012 | 2.2 | Intersection of Taxiways C and D near Rwy 03 thld. | |
| Ely (Ely Muni) | 109.6/ELO | A/2500 | 266 | 17.1 | Over water tower in ‘TOWER MN’. | |
| Fergus Falls | 110.4/FFM | A/2500 | 126 | 7.5 | Over underpass inter-section of 2 hwy's. | |
| Flying Cloud | 117.7/FCM | A/2000 | 278 | 6.0 | Over Chaska water tower. | |
| Gopher (Crystal) | 117.3/GEP | A/1900 | 166 | 4.9 | Over apch end Rwy 14L. | |
| International Falls | 111.0/INL | A/2200 | 135 | 11.0 | Over highway bridge over railroad track. | |
| International Falls (Falls Intl) | 111.0/INL | G | 113 | 0.6 | On taxiway apch end Rwy 31. | |
| Mankato (Mankato Rgnl)..... | 110.8/MKT | G | 317 | .9 | Twy A4 AER 15. | |
| Marshall | 111.0/MML | A/2700 | 308 | 9.6 | Over grain elevator at Minneota. | |
| Montevideo (Montevideo–Chippewa Co)..... | 111.6/MVE | A/2000 | 105 | 11.1 | Over grain elevator straddling train tracks. | |

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VOR RECEIVER CHECK

| | | Type Check Pt. Gnd. | Azimuth from Fac. Mag | Dist. from Fac. N.M. | Checkpoint Description |
|--|------------|------------------------------|--------------------------------|-------------------------------|--|
| Facility Name (Arprt Name) | Freq/Ident | AB/ALT | | | |
| Park Rapids (Park Rapids Muni) | 110.6/PKD | G | 322 | .6 | On twy AER 13. |
| Rochester (Rochester Intl) | 112.0/RST | A/3000 | 024 | 8.8 | Over intersection of Rwy's 02-20 and 13-31. |
| Roseau | 108.8/ROX | A/2400 | 178 | 6.5 | Over microwave twr. |
| Saint Cloud (St Cloud Rgnl) | 112.1/STC | G | 291 | 0.5 | Runup area AER 13. |
| Worthington | 110.6/OTG | A/2800 | 050 | 5.6 | Over grain elevator Brewster. |

VOR TEST FACILITIES (VOT)

| Facility Name (Airport Name) | | Freq. | Type VOT Facility | Remarks |
|--|-------|-------|----------------------|---|
| Minneapolis (Minneapolis St. Paul Intl/Wold Chamberlain) | 111.0 | G | | Usable airborne 2500-4000 MSL within a 15 NM radius of VOT. |
| St Paul (St Paul Downtown Holman Fld) | 114.4 | G | | |

MISSOURI

VOR RECEIVER CHECKPOINTS

| | | Type Check Pt. Gnd. | Azimuth from Fac. Mag | Dist. from Fac. N.M. | Checkpoint Description |
|--|------------|------------------------------|--------------------------------|-------------------------------|--|
| Facility Name (Arprt Name) | Freq/Ident | AB/ALT | | | |
| Butler | 115.9/BUM | A/1800 | 035 | 9.2 | Grain elevator. VOR Checkpoint unusable. |
| Cape Girardeau (Cape Girardeau Rgnl) | 112.9/CGI | G | 112 | .6 | On Twy C1 N of Twy C. |
| Forney (Waynesville-St Robert Rgnl Forney Fld) | 110.0/TBN | G | 173 | 0.53 | On N edge of Army ramp. |
| Kirksville | 114.6/IRK | A/2500 | 136 | 7.4 | Over water tank at La Plata. Checkpoint unusable. |
| Kirksville (Kirksville Rgnl) | 114.6/IRK | G | 132 | 3.4 | On twy just W of terminal area. |
| Malden | 111.2/MAW | A/1500 | 351 | 13.4 | Over intersection of Rwy's 18-36 and 04-22 of Dexter Muni Arprt. |
| Neosho (Joplin Muni) | 117.3/EOS | A/2500 | 344 | 19 | Over apch end Rwy 31. |
| Saint Joseph (Rosecrans Mem) | 115.5/STJ | A/2500 | 167 | 10.7 | Over apch end Rwy 17. |
| Springfield (Springfield-Branson Natl) | 116.9/SGF | G | 193 | 6.8 | At E end of Twy B. |
| Sunshine (Lee C Fine Mem) | 108.4/SHY | A/2500 | 353 | 9 | Highway bridge over Osage River. |

VOR RECEIVER CHECK

VOR TEST FACILITIES (VOT)

| Facility Name (Airport Name) | Freq. | Type VOT Facility | Remarks |
|---|-------|----------------------|---------|
| Jefferson City (Jefferson City Mem) | 112.0 | G | |
| Kansas City (Downtown) | 108.6 | G | |
| St. Louis (Lambert–St Louis Intl) | 111.0 | G | |
| Spirit of St. Louis | 112.2 | G | |

NEBRASKA

VOR RECEIVER CHECKPOINTS

| Facility Name (Arpt Name) | Freq/Ident | Type Check Pt. Gnd. AB/ALT | Azimuth from Fac. Mag | Dist. from Fac. N.M. | Checkpoint Description |
|---|------------|--|--------------------------------|-------------------------------|--|
| Ainsworth | 112.7/ANW | A/3600 | 090 | 13.0 | Over grain elevator south edge at Long Pine. |
| Alliance | 111.8/AIA | A/5000 | 310 | 12.1 | Over grain elevator 1 NM SE of Berea. |
| Beatrice | 110.6/BIE | A/2400 | 046 | 6.1 | Over 260' AGL antenna. |
| Chadron (Chadron Muni) | 113.4/CDR | A/4500 | 017 | 19 | Over intersection of Rwy 20 and 29. |
| Columbus | 112.2/OLU | A/2500 | 082 | 12.7 | Over bridge/railroad tracks at center of Schuyler. |
| Columbus (Columbus Muni) | 112.2/OLU | G | 167 | 0.5 | On twy at apch end Rwy 32. |
| Grand Island (Central Nebraska Rgnl) | 112.0/GRI | G | 177 | 1.5 | On parallel twy at AER 35. |
| Hastings | 108.8/HSI | A/3200 | 266 | 8.1 | Bridge over railroad. |
| Hastings (Hasting Muni)..... | 108.8/HSI | G | 330 | | Apch end Rwy 14. |
| Kearney (Kearney Muni) | 111.2/EAR | G | 211 | 0.5 | South end of main ramp. |
| | | G | 319 | 0.5 | North end of main ramp. |
| Lincoln (Lincoln) | 116.1/LNK | G | 176 | 4.9 | On runup ramp for Rwy 35. |
| Norfolk | 109.6/OFK | A/2600 | 098 | 10.0 | Bridge over river south at Stanton. |
| Norfolk (Karl Stefan Mem) | 109.6/OFK | G | 144 | 0.5 | On runup pad for Rwy 31. |
| North Platte (North Platte Rgnl Airport Lee Bird Field) | 117.4/LBF | G | 013 | 5.5 | On S edge of ramp 200' N of Twy B. |
| O'Neill | 113.9/ONL | A/3000 | 119 | 13 | Over triangle in road intersection. |
| Omaha (Eppley Airfield) | 116.3/OVR | A/2500 | 310 | 10.2 | Over apch end Rwy 32L. |
| Scottsbluff (William B. Heilig Fld) | 112.6/BFF | G | 240 | 5.1 | On NE edge ramp opposite terminal bldg & W of twy to Rwy 30. |
| Searle (Searle Field) | 110.2/SAE | A/4800 | 030 | 7.2 | Over flood-ctl spillway SE end of Lake McConaughy. |
| Thedford (Thomas Co) | 108.6/TDD | A/4000 | 090 | | Over apch end Rwy 11. |

VOR TEST FACILITIES (VOT)

| Facility Name (Airport Name) | Freq. | Type VOT Facility | Remarks |
|--------------------------------------|-------|----------------------|---------|
| Omaha (Eppley Airfield) | 109.0 | G | |

NORTH DAKOTA

VOR RECEIVER CHECKPOINTS

| Facility Name (Arpt Name) | Freq/Ident | Type Check Pt. Gnd. AB/ALT | Azimuth from Fac. Mag | Dist. from Fac. N.M. | Checkpoint Description |
|---|------------|--|--------------------------------|-------------------------------|--|
| Bismarck (Bismarck Muni) | 116.5/BIS | G | 262 | 3.0 | On Twy C5. |
| Dickinson (Dickinson—Theodore Roosevelt Rgnl) | 112.9/DIK | G | 182 | 3.7 | Twy B near ramp. |
| Fargo (Hector Intl) | 116.2/FAR | A/2000 | 360 | 9.4 | Over apch end Rwy 36. |
| Grand Forks (Grand Forks Intl) | 114.3/GFK | G | 157 | 1.0 | On twy A5. |
| Jamestown (Jamestown Rgnl) | 114.5/JMS | G | 141 | 0.6 | On twy strip adjacent to Rwy 31. |
| Minot | 117.1/MOT | A/2800 | 091 | 6.5 | Over railroad and highway overpass. |

SOUTH DAKOTA

VOR RECEIVER CHECKPOINTS

| Facility Name (Arpt Name) | Freq/Ident | Type Check Pt. Gnd. AB/ALT | Azimuth from Fac. Mag | Dist. from Fac. N.M. | Checkpoint Description |
|---|------------|--|--------------------------------|-------------------------------|---|
| Brookings | 108.8/BKX | A/3000 | 072 | 7.5 | Over grain elevator. |
| Mitchell (Mitchell Muni) | 109.2/MHE | A/2500 | 238 | 11.0 | Over intersection of highways ½ NM south o town of Mt. Vernon. |
| Phillip | 109.2/MHE | G | 194 | 0.5 | On main ramp. |
| Pierre (Pierre Rgnl) | 108.4/PHP | A/3300 | 156 | 4.7 | Over radio twr. |
| Pierre (Pierre Rgnl) | 112.5/PIR | G | 251 | 5.6 | On twy in front of terminal building. |
| Rapid City (Rapid City Rgnl) | 112.3/RAP | G | 320 | 4.5 | On ramp in front of administration building adjacent to center twy. |
| Sioux Falls | 115.0/FSD | A/2500 | 009 | 6.9 | Over water twr in Baltic S.D. |
| Sioux Falls (Joe Foss Field) | 115.0/FSD | G | 143 | 4.3 | At intersection of E/W twy and east ramp. |
| Watertown (Watertown Muni) | 116.6/ATY | G | 184 | 3.8 | On SE corner of terminal ramp. |
| Winner | 112.8/ISD | A/3100 | 204 | 8.6 | Over blue water tank S edge of town. |

PARACHUTE JUMPING AREAS

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The following tabulation lists all reported parachute jumping sites in the area of coverage of this directory. Unless otherwise indicated, all activities are conducted during daylight hours and under VFR conditions. The busiest periods of activity are normally on weekends and holidays, but jumps can be expected at anytime during the week at the location listed. Jumps within restricted airspace are not listed.

All times are local and altitudes MSL unless otherwise specified.

Contact facility and frequency is listed at the end of the remarks, when available, in bold face type.

Refer to Federal Aviation Regulations Part 105 for required procedures relating to parachute jumping.

Organizations desiring listing of their jumping activities in this publication should contact the nearest FSS, tower or ARTCC.

Qualified parachute jumping sites will be depicted on the appropriate visual chart(s).

Note: (c) in this publication indicates that the parachute jump area is charted.

To qualify for charting, a jump area must meet the following criteria:

- (1) Been in operation for at least 1 year.
- (2) Operate year round (at least on weekends).
- (3) Log 4,000 or more jumps each year.

In addition, jump sites can be nominated by FAA Regions if special circumstances require charting.

| LOCATION | DISTANCE AND RADIAL FROM NEAREST VOR/VORTAC | MAXIMUM ALTITUDE | REMARKS |
|--|--|---------------------|---|
| IOWA | | | |
| (c) Boone Muni Arpt | 37 NM; 293° Newton | 15,000 | 6 NM radius. Continuous. |
| (c) Cherokee Co Rgnl | 30 NM; 206° Spencer | 12,500 | 5 NM radius. Summer continuous winter weekends and holidays |
| (c) Dallas Center, Husband Field | 25 NM; 305° Des Moines | 12,800 | SR-SS 3 NM radius. Weekends and holidays |
| Davenport | 13 NM; 258° Davenport | 12,500 | 2 NM radius. Daily |
| Decorah Arpt | 15 NM; 264° Waukon | 7,000 AGL | Summer. Tue-Thu 1700-SS, Sat-Sun 1000-SS. Winter. 1000-SS Sat, Sun. |
| Fairfield Muni Arpt | 16 NM; 079° Ottumwa | 12,500 | 5 NM radius. Sat, Sun and holidays SR-SS. |
| Marion Arpt | 14 NM; 047° Cedar Rapids | 15,000 AGL | 3 NM radius. Continuous. |
| (c) New Hampton Muni Arpt | 32 NM; 359° Waterloo | 15,000 AGL | 1 NM radius. Daily. |
| (c) Northwood Muni Arpt | 22 NM; 010° Mason City | 11,500 | 5 NM radius. Apr-Oct, Sat-Sun SR-SS. |
| Perry Muni | 33 NM; 310° Des Moines | 12,500 | 3 NM radius. Weekends and holidays |
| Sioux City | 13 NM; 285° Sioux City | 10,000 | 0.5 NM radius. 0800-2000 daily |
| (c) Vinton Veterans Mem Airpark Arpt... | 24 NM; 330° Cedar Rapids | 15,000 | 5 NM radius. Continuous. |
| (c) Waterloo, Flyers Arpt | 10 NM; 140° Waterloo | 12,000 | 3 NM radius. Summer continuous winter weekends and holidays |
| (c) Winterset-Madison Co Arpt | 17 NM; 248° Des Moines | 14,000 | SR-SS. 5 NM radius. SR-SS daily. |
| KANSAS | | | |
| Atchison, Amelia Earhart Arpt | 26.2 NM; 199° St Joseph | 12,500 | 5 NM radius. Continuous. |
| (c) Junction City, Ft. Riley, Marshall AAF | 6.3 NM; 034° Ft. Riley | 10,000 | 1 NM radius. Daily SR-SS |
| (c) Kingman, Kingman Arpt-Clyde | 22 NM; 195° Hutchinson | 15,000 | 1 NM radius. Fri, Sat, Sun and holidays, SR-SS. |
| Cessna Fld | | | |
| (c) Lyons-Rice Co Muni Arpt | 24.7 NM; 317° Hutchinson | 14,000 | 5 NM radius. Continuous. |
| (c) Usage City Muni | 26 NM; 029° Emporia | 12,000 | 2 NM radius. Sat-Sun, SR-SS. Occassional Mon-Fri, Noon to SS |
| (c) Rose Hill, Cook Airfield | 23 NM; 110° Wichita | 13,500 | 5 NM radius. Daily. |
| St Francis, Cheyenne County Muni | 22.9 NM; 336° Goodland | 16,000 | 3 NM radius Continuous. |
| Salina | 20 NM; 247° Salina | 2,700 | 0.3 NM radius. Occasional use |
| (c) Suppesville | 18 NM; 200° Wichita | 15,000 | 5 NM radius. Sat-Sun and holidays, SR-SS. |
| (c) Wamego Muni Arpt | 19.4 NM; 075° Manhattan | 11,000 | 5 NM radius. Continuous. |
| Wichita, Maize Arpt | 7 NM; 070° Wichita | 11,500 | 1 NM radius. Continuous. |
| (c) Wichita, Sauerman Field | 14NM; 253° Wichita | 13,000 | 5 NM radius. Continuous. |

| PARACHUTE JUMPING AREAS | | | |
|---|--|---------------------|--|
| LOCATION | DISTANCE AND RADIAL FROM NEAREST VOR/VORTAC | MAXIMUM ALTITUDE | REMARKS |
| MINNESOTA | | | |
| Duluth | 5 NM; 120° Duluth | 10,000 | Jun–Aug, Fridays 1800–2030 |
| (c) Hutchinson Muni—Butler Fld Arpt ... | 14 NM; 160° Darwin..... | 13,000 | 5 NM radius. 0800–2359 daily. |
| Waseca Muni | 11 NM; 223° Halfway | 15,000 | 5 NM radius. Continuous. |
| Winsted Muni | 18.4 NM; 109° Darwin..... | 11,500 | 2 NM radius. Daily SR–SS. |
| MISSOURI | | | |
| (c) Butler Mem Arpt | 7 NM; 074° Butler..... | 13,000 | 5 NM radius. Sat–Mon 0500–2200. |
| (c) Charleston, Mississippi Co Arpt | 25 NM; 150° Cape Girardeau | 13,000 | 2 NM radius SR–SS weekends and holidays. |
| (c) Elton Hensley Mem Arpt..... | 10 NM; 078° Columbia | 12,000 | 5 NM radius. Daily 0700–1900. |
| (c) Kimberling Airways Arpt..... | 22 NM; 323° Harrison | 10,000 | 2 NM radius. SR–SS Mon–Sat. |
| (c) Lexington Muni Arpt | 13 NM; 048° Napoleon | 12,500 AGL | SR–SS Sat, Sun, holidays & weekday evenings. |
| (c) Mt Vernon Muni Arpt | 31.5 NM; 235° Springfield | 15,000 | 2 NM radius. Daily SR–SS. Springfield–Branson Natl Twr 124.95 |
| Neosho | 28.7 NM; 337° Neosho..... | 10,000 | |
| (c) Sullivan Rgnl Arpt..... | 26 NM; 073° Vichy | 15,000 | 5 NM radius. SR–SS weekends. Occasional ngt and weekdays. |
| NEBRASKA | | | |
| Blair Muni Arpt | 23 NM; 310° Omaha | 14,000 | 2 NM radius. Sat–Sun SR–SS. Omaha App/Dep Con 120.1 |
| (c) Crete Muni Arpt..... | 22 NM; 195° Lincoln | 14,500 | 2 NM radius. Continuous. Lincoln App/Dep Con 124.0 (1130–0600Z±) Mineapolis Center 128.75 (0600–1130Z±) |
| Mc Cook Rgnl Arpt | 2 NM; 363° Mc Cook | 10,500 | 2 NM radius Mon–Fri 1600–SS and Sat–Sun 0800–SS. |
| (c) Weeping Water, Browns Arpt | 27 NM; 090° Lincoln | 14,000 | 3 NM radius. Apr–Oct, SR–30 min after SS, daily; Oct–Apr, SR–30 min after SS, weekends and Federal holidays. |
| NORTH DAKOTA | | | |
| (c) West Fargo Muni Arpt. | 9 NM; 335° Fargo | 13,500 | 1 NM radius. SR–SS Weekends. Occasional nights and weekdays |

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The purpose of this bulletin is to provide major changes in aeronautical information that have occurred since the last publication date of each Sectional Aeronautical, VFR Terminal Area, and Helicopter Route Charts listed. The general policy is to include only those changes to controlled airspace and special use airspace that present a hazardous condition or impose a restriction on the pilot, and major changes to airports and radio navigational facilities, thereby providing the VFR pilot with the essential data necessary to update and maintain chart currency. The data is grouped by type and then by effective date. When a new edition of the Aeronautical Chart is published, the corrective tabulation will be removed from this bulletin. Inasmuch as this Bulletin provides major changes only, pilots should consult the airport listing in this directory for all new information. Users of U.S. World Aeronautical Charts (WAC) and U.S. Gulf Coast VFR Aeronautical Charts should consult the appropriate Sectional and VFR Terminal Area Charts for revisions.

Military Training Routes (MTRs) are shown on Sectional Aeronautical Charts, VFR Terminal Area, and Helicopter Route Charts. Only the route centerline, direction of flight and the route designator are shown — route widths and altitudes are not shown. Since these routes are subject to change every 56 days and the charts are reissued generally every 6 months, routes with a change in the alignment of the charted route centerline will be listed in this Aeronautical Chart Bulletin below. You are advised to contact the nearest FSS for route dimensions and current status for those routes affecting your flight.

BILLINGS SECTIONAL

80th Edition, 26 Aug 2010

OBSTRUCTIONS

23 Sep 2010 Add obst 2638' MSL (389' AGL), 47°57'08"N, 101°16'31"W.
 Add obst 2629' MSL (389' AGL), 47°56'37"N, 101°17'17"W.
 Add obst 2336' MSL (315' AGL), 47°29'22"N, 101°28'56"W.

AIRPORTS

23 Sep 2010 No Major Changes.

NAVAIDS

23 Sep 2010 No Major Changes.

AIRSPACE

23 Sep 2010 No Major Changes.

SPECIAL USE AIRSPACE

23 Sep 2010 No Major Changes.

MILITARY TRAINING ROUTES

23 Sep 2010 No Major Changes.

MISCELLANEOUS

23 Sep 2010 No Major Changes.

CHEYENNE SECTIONAL

82nd Edition, 29 Jul 2010

OBSTRUCTIONS

29 Jul 2010 No Major Changes.
23 Sep 2010 Add obst 2890' MSL (349' AGL), 44°04'38"N, 102°26'47"W.

AIRPORTS

29 Jul 2010 No Major Changes.
23 Sep 2010 Delete ARTHUR arpt, 41°33'42"N, 101°42'41"W.
 Delete GRANBY SPORTS ultralight flight park, 40°02'55"N, 105°56'18"W.

NAVAIDS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

AIRSPACE

29 Jul 2010 – 23 Sep 2010 No Major Changes.

SPECIAL USE AIRSPACE

29 Jul 2010 – 23 Sep 2010 No Major Changes.

MILITARY TRAINING ROUTES

29 Jul 2010 – 23 Sep 2010 No Major Changes.

MISCELLANEOUS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

CHICAGO SECTIONAL

80th Edition, 6 May 2010

OBSTRUCTIONS

3 Jun 2010 Add windmill farm. 1242' is highest MSL UC, 40°51'29"N, 89°06'25"W.

Add obst 1025' MSL (260' AGL) UC, 41°21'32"N, 90°34'50"W.

Add obst 1464' MSL (305' AGL), 43°34'09"N, 90°39'20"W.

Add obst 1116' MSL (260' AGL) UC, 43°53'29"N, 89°19'41"W.

Add obst 1113' MSL (320' AGL) UC, 43°57'07"N, 89°12'45"W.

Add obst 1000' MSL (288' AGL) UC, 41°06'49"N, 91°51'52"W.

Add obst 1135' MSL (255' AGL) UC, 41°58'18"N, 91°22'46"W.

Add obst 1205' MSL (310' AGL) UC, 42°37'49"N, 85°11'57"W.

29 Jul 2010 Add obst 1549' MSL (265' AGL) UC, 43°39'58"N, 91°55'52"W.

Add obst 1045' MSL (258' AGL) UC, 41°59'18"N, 89°27'38"W.

Add obst 1328' MSL (318' AGL), 41°37'36"N, 85°10'36"W.

Add obst 1045' MSL (258' AGL), 41°59'18"N, 89°27'38"W.

Add obst 1375' MSL (398' AGL) UC, 41°51'42"N, 88°55'58"W.

23 Sep 2010 Add obst 1020' MSL (360' AGL), 41°38'33"N, 86°59'53"W.

Add obst 1262' MSL (259' AGL) UC, 42°14'09"N, 91°24'07"W.

Add obst 967' MSL (258' AGL) UC, 40°55'14"N, 89°16'50"W.

Add obst 895' MSL (258' AGL) UC, 40°28'52"N, 90°18'21"W.

Add obst 788' MSL (258' AGL) UC, 40°25'33"N, 89°47'18"W.

Add obst 1632' MSL (350' AGL) UC, 44°03'08"N, 92°54'04"W.

Add obst 1056' MSL (310' AGL), 42°35'02"N, 85°31'36"W.

Add obst 1243' MSL (310' AGL), 42°36'56"N, 85°22'15"W.

AIRPORTS

3 Jun 2010 No Major Changes.

29 Jul 2010 Delete REINKE arpt, 41°53'57"N, 89°10'13"W.

Change CHICAGO O'HARE INTL ATCT freq from 390.9 to 348.0, 41°58'54"N, 87°54'24"W.

23 Sep 2010 Delete GUTWEIN arpt, 40°54'43"N, 86°52'26"W.

Delete HUNTER arpt, 40°58'52"N, 85°55'44"W.

Delete KLOPFENSTEIN arpt, 40°46'02"N, 86°55'15"W.

Delete DEYOUNG arpt, 42°58'04"N, 85°57'42"W.

Delete HARRINGTON arpt, 41°10'59"N, 86°56'01"W.

NAVAIDS

3 Jun 2010 Change WOLF LAKE VOR to WEBSTER LAKE VOR, 41°14'49"N, 85°29'51"W.

29 Jul 2010 – 23 Sep 2010 No Major Changes.

AIRSPACE

3 Jun 2010 Revise CEDAR RAPIDS, IA Class E. That airspace within a 5 mile radius of the Eastern Iowa Airport. This Class E airspace area is effective during specific dates and times established in advance by a Notice to Airmen. The effective date and time will thereafter be continuously published in the Airport/Facility Directory.

29 Jul 2010 – 23 Sep 2010 No Major Changes.

SPECIAL USE AIRSPACE

3 Jun 2010 – 23 Sep 2010 No Major Changes.

MILITARY TRAINING ROUTES

3 Jun 2010 – 23 Sep 2010 No Major Changes.

MISCELLANEOUS

3 Jun 2010 – 23 Sep 2010 No Major Changes.

GREEN BAY SECTIONAL

80th Edition, 3 Jun 2010

OBSTRUCTIONS**3 Jun 2010** No Major Changes.**29 Jul 2010** Add obst 1531' MSL (310' AGL) UC, 46°31'08"N, 92°54'34"W.

Add obst 1942' MSL (250' AGL) UC, 46°09'40"N, 88°52'40"W.

Add obst 1630' MSL (280' AGL), 46°47'26"N, 92°20'25"W.

Add obst 1590' MSL (320' AGL), 47°04'32"N, 92°45'07"W.

23 Sep 2010 Add obst 1650' MSL (280' AGL) UC, 46°23'09"N, 89°10'52"W.

Add obst 1765' MSL (349' AGL), 47°24'22"N, 91°15'00"W.

Add obst 1223' MSL (305' AGL) UC, 46°31'56"N, 92°23'39"W.

Add obst 1632' MSL (350' AGL) UC, 44°03'08"N, 92°54'04"W.

AIRPORTS**3 Jun 2010 – 29 Jul 2010** No Major Changes.**23 Sep 2010** Delete PIKE arpt, 47°39'07"N, 92°25'00"W.**NAVAIDS****3 Jun 2010** No Major Changes.**29 Jul 2010** Delete CUMBERLAND NDB, 45°30'33"N, 91°58'36"W.**23 Sep 2010** No Major Changes.**AIRSPACE****3 Jun 2010 – 23 Sep 2010** No Major Changes.**SPECIAL USE AIRSPACE****3 Jun 2010 – 23 Sep 2010** No Major Changes.**MILITARY TRAINING ROUTES****3 Jun 2010 – 23 Sep 2010** No Major Changes.**MISCELLANEOUS****3 Jun 2010 – 23 Sep 2010** No Major Changes.

KANSAS CITY SECTIONAL

84th Edition, 3 Jun 2010

OBSTRUCTIONS**3 Jun 2010** No Major Changes.**29 Jul 2010** Add obst 1620' MSL (262' AGL) UC, 36°13'15"N, 93°08'16"W.

Add obst 1067' MSL (265' AGL), 39°51'35"N, 93°12'24"W.

Add obst 1119' MSL (310' AGL), 39°59'44"N, 92°10'38"W.

Add obst 1180' MSL (260' AGL), 37°58'22"N, 91°13'24"W.

Add obst 1334' MSL (425' AGL) UC, 38°53'11"N, 95°02'12"W.

23 Sep 2010 Add obst 941' MSL (278' AGL) UC, 39°23'30"N, 89°51'46"W.

Add obst 1244' MSL (404' AGL), 38°09'08"N, 93°39'44"W.

Add obst 1382' MSL (310' AGL) UC, 39°11'25"N, 96°02'41"W.

Add obst 1279' MSL (260' AGL), 37°53'42"N, 92°05'34"W.

Add obst 1050' MSL (215' AGL), 39°48'01"N, 92°23'59"W.

AIRPORTS**3 Jun 2010** No Major Changes.**29 Jul 2010** AIR PARK SOUTH arpt closed, 37°03'34"N, 93°14'03"W.**23 Sep 2010** Delete ARRAS arpt, 39°20'17"N, 90°10'41"W.**NAVAIDS****3 Jun 2010** No Major Changes.**29 Jul 2010** Delete KENNETT NDB, 36°13'42"N, 90°02'21"W.**23 Sep 2010** Shutdown PITTSBURG NDB, 37°26'33"N, 94°43'36"W.**AIRSPACE****3 Jun 2010 – 23 Sep 2010** No Major Changes.**SPECIAL USE AIRSPACE****3 Jun 2010 – 23 Sep 2010** No Major Changes.**MILITARY TRAINING ROUTES****3 Jun 2010 – 23 Sep 2010** No Major Changes.**MISCELLANEOUS****3 Jun 2010 – 23 Sep 2010** No Major Changes.

KANSAS CITY TERMINAL AREA CHART
71st Edition, 3 Jun 2010**OBSTRUCTIONS****3 Jun 2010** No Major Changes.**29 Jul 2010** Add obst 1334'MSL (425'AGL)UC, 38°53'11"N, 95°02'12"W.**23 Sep 2010** No Major Changes.**AIRPORTS****3 Jun 2010 – 23 Sep 2010** No Major Changes.**NAVAIDS****3 Jun 2010 – 23 Sep 2010** No Major Changes.**AIRSPACE****3 Jun 2010 – 23 Sep 2010** No Major Changes.**SPECIAL USE AIRSPACE****3 Jun 2010 – 23 Sep 2010** No Major Changes.**MILITARY TRAINING ROUTES****3 Jun 2010 – 23 Sep 2010** No Major Changes.**MISCELLANEOUS****3 Jun 2010 – 23 Sep 2010** No Major Changes.

MEMPHIS SECTIONAL
85th Edition, 23 Sep 2010**OBSTRUCTIONS****23 Sep 2010** No Major Changes.**AIRPORTS****23 Sep 2010** No Major Changes.**NAVAIDS****23 Sep 2010** No Major Changes.**AIRSPACE****23 Sep 2010** No Major Changes.**SPECIAL USE AIRSPACE****23 Sep 2010** No Major Changes.**MILITARY TRAINING ROUTES****23 Sep 2010** No Major Changes.**MISCELLANEOUS****23 Sep 2010** No Major Changes.

MINNEAPOLIS-ST. PAUL TERMINAL AREA CHART
74th Edition, 1 Jul 2010**OBSTRUCTIONS****29 Jul 2010 – 23 Sep 2010** No Major Changes.**AIRPORTS****29 Jul 2010 – 23 Sep 2010** No Major Changes.**NAVAIDS****29 Jul 2010 – 23 Sep 2010** No Major Changes.**AIRSPACE****29 Jul 2010 – 23 Sep 2010** No Major Changes.**SPECIAL USE AIRSPACE****29 Jul 2010 – 23 Sep 2010** No Major Changes.**MILITARY TRAINING ROUTES****29 Jul 2010 – 23 Sep 2010** No Major Changes.**MISCELLANEOUS****29 Jul 2010 – 23 Sep 2010** No Major Changes.

OMAHA SECTIONAL
82nd Edition, 29 Jul 2010**OBSTRUCTIONS****29 Jul 2010** No Major Changes.**23 Sep 2010** Add obst 1643' MSL (220' AGL) UC, 43°13'08"N, 95°18'19"W.

Add obst 3260' MSL (498' AGL), 40°13'14"N, 100°55'00"W.

Add obst 1449' MSL (310' AGL) UC, 40°50'41"N, 95°20'54"W.

Add obst 1632' MSL (350' AGL) UC, 44°03'08"N, 92°54'04"W.

Add obst 3046' MSL (320' AGL) UC, 41°05'24"N, 99°45'37"W.

Add obst 3163' MSL (414' AGL), 41°46'47"N, 100°06'20"W.

Add obst 2039' MSL (349' AGL), 43°44'37"N, 99°06'15"W.

Add obst 2101' MSL (349' AGL), 43°54'14"N, 99°58'01"W.

AIRPORTS**29 Jul 2010 – 23 Sep 2010** No Major Changes.**NAVAIDS****29 Jul 2010 – 23 Sep 2010** No Major Changes.**AIRSPACE****29 Jul 2010 – 23 Sep 2010** No Major Changes.**SPECIAL USE AIRSPACE****29 Jul 2010 – 23 Sep 2010** No Major Changes.**MILITARY TRAINING ROUTES****29 Jul 2010 – 23 Sep 2010** No Major Changes.**MISCELLANEOUS****29 Jul 2010 – 23 Sep 2010** No Major Changes.

ST. LOUIS SECTIONAL

82nd Edition, 1 Jul 2010

OBSTRUCTIONS

29 Jul 2010 Add obst 1022' MSL (308' AGL) UC, 39°38'13"N, 87°04'56"W.
 Add obst 883' MSL (383' AGL) UC, 37°21'47"N, 87°30'56"W.
 Add obst 1386' MSL (255' AGL) UC, 37°10'17"N, 84°34'39"W.
 Add obst 990' MSL (258' AGL) UC, 39°53'39"N, 88°43'31"W.
 Add obst 848' MSL (260' AGL) UC, 38°50'53"N, 90°47'56"W.
23 Sep 2010 Add obst 1088' MSL (299' AGL), 38°48'58"N, 84°46'53"W.
 Add obst 941' MSL (278' AGL) UC, 39°23'29"N, 89°51'46"W.
 Add obst 876' MSL (258' AGL) UC, 39°32'44"N, 89°09'24"W.
 Add obst 1109' MSL (310' AGL) UC, 38°50'24"N, 85°29'50"W.
 Add obst 835' MSL (290' AGL) UC, 36°34'39"N, 87°08'32"W.
 Add obst 2115' MSL (265' AGL) UC, 36°08'04"N, 85°04'08"W.
 Add obst 972' MSL (255' AGL), 37°42'39"N, 86°31'35"W.
 Add obst 1049' MSL (255' AGL), 37°06'16"N, 85°26'55"W.

AIRPORTS

29 Jul 2010 Change CTAF 122.9 to 122.8 at CYNTHIANA-HARRISON CO arpt 38°21'58"N, 84°17'00"W.
23 Sep 2010 Delete CAREFERRE ACRES arpt, 39°10'59"N, 87°07'34"W.
 Delete ARRAS RLA arpt, 39°20'17"N, 90°10'41"W.
 Change CTAF 122.8 to 123.05 at ALEXANDRIA arpt, 40°13'57"N, 85°38'15"W.
 Change CTAF 122.8 to 122.9 at CYNTHIANA-HARRISON CO arpt, 38°21'58"N, 84°17'00"W.

NAVAIDS

29 Jul 2010 Delete DYERSBURG NDB, 35°59'42"N, 89°24'20"W.
23 Sep 2010 Delete NORTH VERNON NDB, 39°02'59"N, 85°36'03"W.
 Delete GENEVA NDB, 37°48'11"N, 87°46'14"W.

AIRSPACE

29 Jul 2010 Revise MARION, IL Class E: That airspace extending upward from 700 feet above the surface bounded by a line beginning at lat. 37°53'40" N., long. 88°48'35" W.; to lat. 37°56'25" N., long. 89°02'40" W.; to lat. 37°58'45" N., long. 89°20'25" W.; to lat. 37°47'25" N., long. 89°26'00" W.; to lat. 37°42'10" N., long. 89°24'00" W.; to lat. 37°40'46" N., long. 89°20'17" W.; to lat. 37°34'56" N., long. 89°20'25" W.; to lat. 37°34'48" N., long. 89°10'21" W.; to lat. 37°37'05" N., long. 89°10'18" W.; to lat. 37°32'50" N., long. 88°59'00" W.; to lat. 37°42'35" N., long. 88°52'15" W.; to the point of beginning. Revise MANILA, AR Class E: That airspace extending upward from 700 feet above the surface within a 6.4-mile radius of Manila Municipal Airport.
23 Sep 2010 No Major Changes.

SPECIAL USE AIRSPACE

29 Jul 2010 No Major Changes.
23 Sep 2010 Add SULLIVAN, IN. Restricted Area, R-3405. Beginning at 39°07'41"N, 87°22'02"W; to 39°07'41"N, 87°21'29"W; to 39°07'39"N, 87°21'29"W; to 39°07'39"N, 87°21'26"W; to 39°07'41"N, 87°21'25"W; to 39°07'41"N, 87°21'12"W; to 39°07'00"N, 87°21'08"W; to 39°07'00"N, 87°21'46"W; to 39°06'36"N, 87°21'47"W; to 39°06'36"N, 87°22'03"W; to the point of beginning. Designated altitudes. Surface up to and including 1,600 feet MSL. Times of Designation. By NOTAM 24 hours in advance. Controlling Agency. FAA, Terre Haute ATCT.
 Revise CRANE, IN. Restricted Area R-3404. That airspace within a 1 NM radius of 38°49'30"N, 86°50'08"W. Designated altitudes. Surface to and including 4,100 feet MSL. Time of designation. Sunrise to sunset, daily from May 1 through and including November 1. Other times by NOTAM 24 hours in advance. Controlling agency. FAA, Terre Haute ATCT.

MILITARY TRAINING ROUTES

29 Jul 2010 – 23 Sep 2010 No Major Changes.

MISCELLANEOUS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

ST. LOUIS TERMINAL AREA CHART

74th Edition, 1 Jul 2010

OBSTRUCTIONS

29 Jul 2010 Add obst 848' MSL (260' AGL) UC, 38°50'53"N, 90°47'56"W.

23 Sep 2010 No Major Changes.

AIRPORTS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

NAVAIDS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

AIRSPACE

29 Jul 2010 – 23 Sep 2010 No Major Changes.

SPECIAL USE AIRSPACE

29 Jul 2010 – 23 Sep 2010 No Major Changes.

MILITARY TRAINING ROUTES

29 Jul 2010 – 23 Sep 2010 No Major Changes.

MISCELLANEOUS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

TWIN CITIES SECTIONAL

80th Edition, 1 Jul 2010

OBSTRUCTIONS

29 Jul 2010 Add obst 1765' MSL (420' AGL), 45°57'52"N, 95°03'42"W.

Add obst 1709' MSL (320' AGL), 46°18'32"N, 95°30'00"W.

Add obst 1682' MSL (320' AGL), 47°26'32"N, 93°50'09"W.

Add obst 1693' MSL (320' AGL), 47°03'17"N, 94°26'03"W.

Add obst 1789' MSL (320' AGL), 46°56'58"N, 94°50'44"W.

Add obst 1590' MSL (320' AGL), 47°04'32"N, 92°45'07"W.

Add obst 1658' MSL (320' AGL), 46°24'12"N, 95°32'24"W.

Add windmill farm. 1910' is highest MSL, 47°19'09"N, 97°55'56"W.

23 Sep 2010 Add obst 1458' MSL (265' AGL), 45°44'03"N, 93°56'21"W.

Add obst 1547' MSL (325' AGL) UC, 46°04'28"N, 94°28'29"W.

Add obst 1418' MSL (350' AGL) UC, 45°34'32"N, 93°55'25"W.

Add obst 1840' MSL (350' AGL) UC, 46°55'20"N, 93°55'18"W.

Add obst 1389' MSL (350' AGL) UC, 44°49'58"N, 94°16'51"W.

Add obst 1578' MSL (300' AGL) UC, 46°59'58"N, 93°02'38"W.

Add obst 1805' MSL (305' AGL) UC, 46°56'11"N, 95°13'26"W.

Add obst 1668' MSL (250' AGL) UC, 46°15'20"N, 95°04'21"W.

Add obst 1531' MSL (255' AGL) UC, 45°20'30"N, 95°05'09"W.

Add obst 2118' MSL (420' AGL) UC, 47°10'06"N, 95°27'16"W.

AIRPORTS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

NAVAIDS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

AIRSPACE

29 Jul 2010 No Major Changes.

23 Sep 2010 Add PAYNESVILLE, MN Class E: That airspace extending upward from 700 feet above the surface within a 7.2-mile radius of Paynesville Municipal Airport.

SPECIAL USE AIRSPACE

29 Jul 2010 – 23 Sep 2010 No Major Changes.

MILITARY TRAINING ROUTES

29 Jul 2010 – 23 Sep 2010 No Major Changes.

MISCELLANEOUS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

WICHITA SECTIONAL
85th Edition, 29 Jul 2010

OBSTRUCTIONS

29 Jul 2010 No Major Changes.

23 Sep 2010 Add obst 3260'MSL (498'AGL)UC, 40°13'14"N, 100°55'00"W.

AIRPORTS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

NAVAIDS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

AIRSPACE

29 Jul 2010 No Major Changes.

23 Sep 2010 Add SYRACUSE, KS Class E: That airspace extending upward from 700 feet above the surface within a 7.3-mile radius of Syracuse-Hamilton County Municipal Airport.

SPECIAL USE AIRSPACE

29 Jul 2010 – 23 Sep 2010 No Major Changes.

MILITARY TRAINING ROUTES

29 Jul 2010 – 23 Sep 2010 No Major Changes.

MISCELLANEOUS

29 Jul 2010 – 23 Sep 2010 No Major Changes.

SUPPLEMENTAL COMMUNICATION REFERENCE

Contained within this tabulation, and listed alphabetically by airport name, are all private-use airports charted on the U.S. IFR Enroute Low and High Altitude charts in the United States, having terminal approach and departure control facilities. Additionally, listed by country, are all Canadian and Mexican airports that appear on the U.S. IFR Enroute charts with approach and departure control services. All frequencies transmit and receive unless otherwise noted. Radials defining sectors are outbound from the facility.

UNITED STATES

| FACILITY NAME | CHART & PANEL |
|--|-----------------|
| Frankfort, IL (LL40) Chicago App/Dep Con 133.1 285.6 | L-28H |
| Glasgow Industrial, MT (Ø7MT) Salt Lake Center App/Dep Con 126.85 305.2 | H-1E, 2F, L-13D |
| USAF Academy Bullseye Aux Airstrip, CO (C090) ASOS 118.325 | L-10F |
| West Kentucky Airpark, KY (5KY3) Memphis Center App/Dep Con 133.65 292.15 | L-16I |
| William P Gwinn, FL (Ø6FA) Gwinn Tower 120.4 279.25 (Mon-Fri 1300-2100Z‡) Gnd Con 121.65 279.25 | H-8I, L-23C |

CANADA

| FACILITY NAME | CHART & PANEL |
|--|-------------------|
| Abbotsford, BC (CYXX) ATIS 119.8 (1500-0700Z‡) Victoria Trml App/Dep Con 132.7 (Avbl on ground) 290.8 Tower 119.4 (Inner) 121.0 (Outer) 295.0 (1500-0700Z‡) Gnd Con 121.8 MF 119.4 295.0 (0700-1500Z‡) (Shape irregular to 4500') | H-1B, L-12F |
| Amos/Magny, QC (CYEY) Montreal Center App/Dep Con 125.9 | H-11B |
| Atikokan Muni, ON (CYIB) MF 122.3 (5 NM to 4500' No ground station) | L-14I |
| Barrie-Orillia (Lake Simcoe Rgnl), ON (CYLS) AWOS 122.55 (Pvt) Toronto Center App/Dep Con 124.025 | H-11B, L-31D |
| Bar River, ON (CPF2) Toronto Center App/Dep Con 132.65 | L-31C |
| Bathurst, NB (CZBF) Moncton Center App/Dep Con 134.25 | L-32J |
| Boundary Bay, BC (CZBB) ATIS 125.5 (1500-0700Z‡) Vancouver App/Dep Con 132.3 363.8 Tower 118.1 (Inner) 127.6 (Outer) (1500-0700Z‡) Gnd Con 124.3 MF 118.1 (0700-1500Z‡ to 2000'. Vancouver Trml 125.2 above 2000'. Shape irregular to 2500'). | H-1B, L-1E |
| Brampton, ON (CNC3) Toronto Trml App/Dep Con 119.3 253.1 | L-31D |
| Brandon Muni, MB (CYBR) Winnipeg Center App/Dep Con 132.25 285.4 MF 122.1 (5 NM to 4000') | H-2H |
| Brantford, ON (CYFD) Toronto Trml App/Dep Con 128.27 | L-31D |
| Brockville-Thousand Islands Rgnl Tackaberry, ON (CNL3) Montreal Center App/Dep Con 134.675 | L-32G |
| Bromont, QC (CZBM) Montreal Center App/Dep Con 132.35 MF 122.15 (5 NM to 3400') | L-32G |
| Burlington Airpark, ON (CZBA) Toronto Center App/Dep Con 119.3 253.1 | L-31D |
| Castlegar/West Kootenay Rgnl, BC (CYCG) Vancouver Center App/Dep Con 134.2 227.3 MF 122.1 (5 NM to 6500') | H-1C |
| Centralia/James T. Fld Muni, ON (CYCE) Toronto Center App/Dep Con 135.30 | H-10G, 11B, L-31D |
| Charlottetown, PE (CYYG) Moncton Center App/Dep Con 135.65 384.8 MF 118.0 (5 NM to 3200') | H-11E, L-32J |
| Chatham-Kent, ON (CNZ3) Cleveland Center App/Dep Con 132.25 | H-10G, L-30G |

| FACILITY NAME | CHART & PANEL |
|--|-------------------|
| Collingwood, ON (CNY3) Toronto Center App/Dep Con 124.02 | H-11B, L-31D |
| Cornwall Rgnl, ON (CYCC) Boston Center App/Dep Con 135.25 377.1 | L-32G |
| Cranbrook/Canadian Rockies Intl, BC (CYXC) Vancouver Center App/Dep Con 133.6 MF 122.3 (5 NM to 6100') | H-1C |
| Debert, NS (CCQ3) Halifax Trml App/Dep Con 119.2 | H-11E, L-32J |
| Digby, NS (CYID) Moncton Center App/Dep Con 123.9 | L-32J |
| Downsview, ON (CYZD) Toronto Center App/Dep Con 133.4 MF 126.2 (1300-2300Z†, 3 NM to 1700') | H-11B, L-31E |
| Drummondville, QC (CSC3) Montreal Center App/Dep Con 132.35 | L-32H |
| Earlton (Timiskaming Rgnl), ON (CYXR) MF 122.0 (5 NM to 3800') AWOS 128.6 | H-11B |
| Elliot Lake Muni, ON (CYEL) Toronto Center App/Dep Con 135.4 | L-31C |
| Fort Frances Muni, ON (CYAG) Minneapolis Center App/Dep Con 120.9 | L-14H |
| Fredericton Intl, NB (CYFC) ATIS 127.55 (1045-0245Z†, OT AWOS) Moncton Center App/Dep Con 124.3 135.5 270.8 Tower 119.0 (1045-0245Z†) Gnd Con 121.7 (1045-0245Z†) MF 119.0 (0245-1045Z†, 5 NM to 3500') | H-11E, L-32I |
| Goderich, ON (CYGD) Toronto Center App/Dep 135.3 266.3 | H-11B, L-31D |
| Greenwood, NS (CYZX) ATIS 128.85 244.3 (1100-0000Z†) App/Dep Con 120.6 335.9 Tower 119.5 126.2 236.6 324.3 Gnd Con 133.75 289.4 Clncl Del 128.025 283.9 | H-11E, L-32J |
| Grimsby Air Park, ON (CNZ8) Toronto Trml App/Dep Con 128.27 268.75 Tower 125.0 308.475 | L-31E |
| Halifax/Shearwater, NS (CYAW) ATIS 129.175 (Ltd hrs) App/Dep Con 119.2 MF Shearwater Advisory 119.0 126.2 340.2 360.2 (Ltd hrs) Gnd Con 121.7 250.1 | H-11E, L-32J |
| Halifax/Stanfield Intl, NS (CYHZ) ATIS 121.0 Moncton Center App/Dep Con 118.7 119.2 128.55 135.3 363.8 Tower 118.4 236.6 Gnd Con 121.9 275.8 Clncl Del 123.95 Apron Advisory 122.125 | H-11E, L-32J |
| Hamilton, ON (CYHM) ATIS 128.1 Toronto Trml App/Dep Con 128.27 268.75 Tower 119.7 125.0 Gnd Con 121.6 | H-10H, 11B, L-11B |
| Kingston, ON (CYGK) Montreal Center App/Dep Con 135.05 398.4 (0400-1115Z†) MF 122.5 (1115-0400Z† 5 NM to 3300') | H-11C, L-31E, 32F |
| Kitchener/Waterloo, ON (CYKF) ATIS 125.1 (1200-0400Z†) Toronto Trml App/Dep Con 128.275 Waterloo Tower 126.0 118.55 (1200-0400Z†) Gnd Con 121.8 MF 126.0 (0400-1200Z† 5 NM to 4000') | H-11B, L-31D |
| Lachute, QC (CSE4) Montreal Center App Con 124.65 132.85 268.3 Montreal Center Dep Con 132.85 268.3 | L-32G |
| La Tuque, QC (CYLQ) Montreal Center App/Dep Con 134.5 | H-11C |
| Langley, BC (CYNJ) ATIS 124.5 (1630-0230Z, DT 1530-0330Z) Victoria Trml App/Dep Con 132.7 290.8 Tower 119.0 (1630-0230Z, DT 1530-0330Z) Gnd Con 121.9 MF 119.0 (0230-1630Z, DT 0330-1530Z 3 NM to 1900') | L-1E |

| FACILITY NAME | CHART & PANEL |
|---|---------------------------|
| Leamington, ON (CLM2) Cleveland Center App/Dep Con 132.45 | L-30F |
| Lethbridge, AB (CYQL) ATIS 124.4 (1300-0545Z‡) Edmonton Center App/Dep Con 132.75 265.2 MF 121.0 (5 NM to 6000') | H-1D |
| Lindsay, ON (CNF4) Toronto Center App/Dep 134.25 | L-31E, L-32F |
| Liverpool/South Shore Rgnl, NS (CYAU) Moncton Center App/Dep Con 123.9 | L-32J |
| London, ON (CYXU) ATIS 127.8 (1120-0345Z‡) Toronto Center App/Dep 135.3 135.625 Tower 119.4 125.65 (1120-0345Z‡) Gnd Con 121.9 MF 119.4 (0345-1120Z‡ 5 NM to 3000') | H-10G, 11B, L-30G, 31D |
| Manitowaning/Manitoulin East Muni, ON (CYEM) Toronto Center App/Dep 135.4 260.9 | L-31C |
| Maniwaki, QC (CYMW) Montreal Center App/Dep Con 126.57 | L-32G |
| Mascouche, QC (CSK3) MF 122.35 (5 NM to 2500'. No gnd station. Excluding the portion S of the N shore of Riviere des Milles-Iles and 1 NM around Lac Agile Mascouche arpt.) | L-32G |
| Medicine Hat, AB (CYXH) AWOS 124.875 (0345-1245Z‡) MF 122.2 (1245-0345Z‡ 5 NM to 5400') | H-1D |
| Midland/Huronía, ON (CYEE) Toronto Center App/Dep 124.025 | L-31D |
| Miramichi, NB (CYCH) Moncton Center App/Dep Con 123.7 | H-11E, L-32J |
| Moncton/Greater Moncton Intl, NB (CYQM) ATIS 128.65 App/Dep 124.4 Tower 120.8 236.6 Gnd Con 121.8 275.8 Apron Advisory 122.075 | H-11E, L-32J |
| Mont-Laurier, QC (CSD4) Montreal Center App/Dep Con 126.57 | L-32G |
| Montreal Intl (Mirabel), QC (CYMX) ATIS 125.7 Montreal Center App Con 124.65 132.85 268.3 Montreal Dep Con 132.85 268.3 MF 119.1 (7 NM shape irregular to 2000') VFR Advisory 134.15 | H-11C, 12K, L-32G |
| Montreal/Pierre Elliott Trudeau Intl, QC (CYUL) ATIS 133.7 Montreal Trml App Con 118.9 124.65 126.9 132.85 268.3 Tower 119.9 267.1 Gnd Con 121.9 275.8 Clnc Del 125.6 Apron 122.075 Montreal Trml Dep Con 118.9 (SE-S-SW) 124.65 (W-NW-NE) 268.3 VFR Advisory 134.15 | H-11C, 12K, L-32G |
| Montreal/St-Hubert, QC (CYHU) ATIS 124.9 (Apr-Oct 1045-0500Z‡, Nov-Mar 1045-0400Z) AWOS 124.9 Montreal Center App/Dep Con 125.15 268.3 St. Hubert Tower 118.4 (Apr-Oct 1045-0500Z‡, Nov-Mar 1045-0400Z) Gnd Con 126.4 MF 118.4 (Apr-Oct 0500-1045Z‡, Nov-Mar 0400-1045Z 5 NM shape irregular to 2500') VFR Advisory 134.15 | H-11C, L-32G |
| Muskoka, ON (CYQA) AWOS 124.575 Timmins Radio App/Dep Con 122.3 MF 122.3 (5 NM to 3900') | H-11B, L-31D |
| Nanaimo, BC (CYCD) Victoria Trml App/Dep 120.8 133.95 252.3 MF 122.1 291.8 1330-0530Z‡ (5 NM to 2500') | H-1B, L-1E |
| North Bay, ON (CYYB) ATIS 124.9 (1130-0330Z‡) Toronto Center App/Dep 121.225 127.25 MF 118.3 (1130-0330Z‡ 7 NM to 5000') | H-11B, L31D |
| Oshawa, ON (CYOO) ATIS 125.675 (1130-0330Z‡) Toronto Trml App/Dep Con 133.4 Tower 120.1 (1130-0330Z‡) Gnd Con 118.4 MF 120.1 (0330-1130Z‡ 5 NM to 3000') | L-31E |

| FACILITY NAME | CHART & PANEL |
|---|-------------------|
| Ottawa/Carp, ON (CYRP) ATIS 121.15 Ottawa Trml App/Dep Con 128.175 | L-31E, 32F |
| Ottawa/Gatineau, QC (CYND) Ottawa Trml App/Dep Con 127.7 128.175 MF 122.3 (5 NM shape irregular to 2500') VFR Advisory Ottawa Trml 127.7 | H-11C, L-32G |
| Ottawa/MacDonald-Cartier Intl, ON (CYOW) ATIS 121.15 Ottawa App Con 135.15 Tower 118.8 (VFR South) 120.1 (VFR North) 118.8 341.3 Gnd Con 121.9 Cinc Del 119.4 Ottawa Dep Con 128.175 | L-11C |
| Owen Sound/Billy Bishop Rgnl, ON (CYOS) Toronto Center App/Dep 132.575 290.6 | L-31D |
| Pelee Island, ON (CYPT) Cleveland Center App/Dep Con 126.35 360.0 | L-30F |
| Pembroke, ON (CYTA) Montreal Center App/Dep Con 135.2 Petawawa Advisory 126.4 250.1 (Mon-Fri 1300-2130Z†, OT PPR) | H-11C, L-31E, 32F |
| Penticton, BC (CYYF) Vancouver Center App/Dep Con 133.5 351.3 MF 118.5 (5 NM to 4100') | H-1B |
| Peterborough, ON (CYPQ) AWOS 126.925 Toronto Center App/Dep 134.25 | H-11B, L-31E, 32F |
| Pincher Creek, AB (CZPC) Edmonton Center App/Dep Con 132.75 265.2 | H-1D |
| Pitt Meadows, BC (CYPK) ATIS 125.0 (1500-0700Z†) Vancouver Center App Con 128.6 352.7 (Outer) Pitt Tower 126.3 (1500-0700Z†) Gnd Con 123.8 Vancouver Center Dep Con 132.3 363.8 (South) MF 126.3 (0700-1500Z†) (3NM to 2500') | L-1E |
| Quebec/Jean Lesage Intl, QC (CYQB) ATIS 134.6 Montreal Center App/Dep Con 124.0 127.85 135.025 270.9 322.8 Tower 118.65 236.6 Gnd Con 121.9 250.0 | H-11D, L-32H |
| Riviere Du Loup, QC (CYRI) AWOS 122.025 (Pvt) Montreal Center App/Dep Con 125.1 299.6 | H-11D |
| Rouyn Noranda, QC (CYUY) Montreal Center App/Dep Con 125.9 MF 122.2 (5 NM to 4000') | H-11B |
| Saint John, NB (CYSJ) Moncton Center App/Dep Con 124.3 135.5 270.8 MF 118.5 (5 NM to 3400') | H-11E, L-32J |
| Sarnia (Chris Hadfield), ON (CYZR) AWOS 119.125 Toronto Center App/Dep Con 134.375 | H-10G, 11B, L-30F |
| Sault Ste Marie, ON (CYAM) ATIS 133.05 (1300-0100Z†) Toronto Center App/Dep Con 132.65 344.5 Tower 118.8 (1300-0100Z†) Gnd Con 121.7 (1300-0100Z†) MF 118.8 (0100-1300Z† 5 NM irregular shape to 3000') | H-2K, L-31B |
| Sherbrooke, QC (CYAM) AWOS 126.25 Montreal Center App/Dep Con 132.55 MF 123.5 (Ltd hrs 5 NM to 3800') | H-11D, L-32H |
| South Renfrew Muni, ON (CNP3) Montreal Center App/Dep 124.275 | L-31E, 32F |
| Southport, MB (CYPG) ATIS 120.85 (Mon-Fri 1400-2300Z† except holidays) Tower 126.2 384.2 (Mon-Fri 1400-2300Z† except holidays) Gnd Con 121.7 275.8 | H-2H |

| FACILITY NAME | CHART & PANEL |
|--|-------------------|
| Springwater Barrie Airpark, ON (CNA3) Toronto Center App/Dep Con 124.025 | L-31D |
| St. Catharines/Niagara District, ON (CYSN) ATIS 128.525 (1215-0200Z‡) Toronto Trml App/Dep Con 133.4 253.1 MF 123.25 (1215-0200Z‡ 5 NM to 3300') | H-10H, 11B, L-31E |
| St. Frederic, QC (CSZ4) Montreal Center App/Dep Con 135.025 270.9 | L-32H |
| St. Georges, QC (CYSG) Montreal Center App/Dep Con 132.35 MF 122.15 (5 NM 3900' ASL) | H-32H, L-11D |
| St. Jean, QC (CYJN) Montreal Center App/Dep Con 125.15 268.3 Tower 118.2 (Apr-Oct 1230-0230Z‡ Nov-Mar 1300-0200Z‡) Gnd Con 121.7 | L-32G |
| Sudbury, ON (CYSB) ATIS 127.4 Toronto Center App/Dep Con 135.5 MF 125.5 (7 NM to 4000') | H-31B, 10G, L-31D |
| Summerside, PE (CYSU) AWOS 122.55 (Pvt) Moncton Center App/Dep Con 124.4 384.8 | H-11E, L-32J |
| Thunder Bay, ON (CYQT) ATIS 128.8 (1100-0400Z‡) Winnipeg Center App/Dep Con 132.125 Tower 118.1 (1100-0400Z‡) Gnd Con 121.9 (1100-0400Z‡) App/Dep 119.2 MF 118.1 (0400-1100Z‡ 5 NM to 4000') | H-2J, L-14J |
| Timmins/Victor M. Power, ON (CYTS) ATIS 124.95 (1000-0500Z‡) Toronto Center App/Dep Con 128.3 MF 122.3 (5 NM to 4000') | H-11B |
| Toronto/Buttonville Muni, ON (CYKZ) ATIS 127.1 (1200-0400Z‡) Toronto Trml App/Dep Con 133.4 Tower 124.8 119.9 (1200-0400Z‡) Gnd Con 121.8 (1200-0400Z‡) MF 124.8 (0400-1200Z‡ No gnd station. 5 NM shape irregular to below 2500') | L-31E |
| Toronto/Billy Bishop Toronto City Airport, ON (CYYZ) ATIS 133.6 (1130-0400Z‡) App/Dep Con 133.4 Tower 118.2 119.2 (1130-0400Z‡) Gnd Con 121.7 | L-31E |
| Toronto/Lester B Pearson Intl, ON (CYYZ) ATIS 120.825 App Con 124.475 125.4 132.8 Dep Con 127.575 128.8 Tower 118.35 118.7 Gnd Con 119.1 121.65 121.9 Clnc Del 121.3 (1200-0400Z‡) | H-11B, L-31D |
| Trenton, ON (CYTR) ATIS 135.45 257.7 App/Dep Con 128.4 324.3 Tower 128.7 236.6 Gnd Con 121.9 275.8 Clnc Del 124.35 286.4 | H-11C, L-31E, 32F |
| Trenton/Mountain View, ON (CPZ3) Trenton Mil Advisory 268.0 | H-11C, L-31E, 32F |
| Trois-Rivieres, QC (CYRQ) Montreal Center App/Dep Con 128.225 229.2 MF 123.0 (5 NM to 3200') | H-11C, L-32H |
| Val-D'or, QC (CYVO) Montreal Center App/Dep Con 125.9 308.3 MF 118.5 (1030-0325Z‡ 5 NM to 4000') | H-11B |
| Vancouver Intl, BC (CYVR) ATIS 124.6 124.75 App Con 128.6 128.17 352.7 (Outer) 133.1 134.225 352.7 (Inner) Dep Con 126.125 (north) 132.3 (south) 363.8 Tower 118.7 (south) 119.55 (north) VFR 124.0 125.65 226.5 236.6 Gnd Con 121.7 (south) 127.15 (north) 275.8 Clnc Del 121.4 | H-1B, L-1E |

| FACILITY NAME | CHART & PANEL |
|--|---------------|
| Victoria Intl, BC (CYYJ) ATIS 118.8 (1400-0800Z‡) App Con 125.95 Dep Con 133.85 Tower 119.1 (Outer) 119.7 (Inner) 239.6 Gnd Con 121.9 361.4 (1400-0800Z‡ OT ctc Kamloops 119.7) Cinc Del 126.4 (1400-0800Z‡) | H-1B, L-1E |
| Victoriaville, QC (CSR3) Montreal Center App Con 132.35 | L-32H |
| Waterville/Kings Co Muni, NS (CCW3) Greenwood Trml App/Dep Con 120.6 335.9 Greenwood Tower 119.5 324.3 | L-32J |
| Warton, ON (CYVW) Toronto Center App/Dep Con 132.575 MF 122.2 (5 NM to 3700') | H-11B, L-31D |
| Windsor, ON (CYQG) ATIS 134.5 (1130-0330Z‡) Detroit App/Dep Con 126.85 127.5 134.3 348.3 363.2 Tower 124.7 (1130-0330Z‡) Gnd Con 121.7 (1130-0330Z‡) MF 124.7 (0330-1130Z‡ 6 NM irregular shape to below 3000') VFR Advisory Detroit App Con 134.3 | H-10G, L-8J |
| Yarmouth, NS (CYQI) Moncton Center App/Dep Con 123.9 368.5 MF 123.0 (5 NM to 3100') | H-11E, L-32I |

MEXICO

| FACILITY NAME | CHART & PANEL |
|--|----------------|
| Abraham Gonzalez Intl (MMCS) Juarez App Con 119.9 Juarez Tower 118.9 | H-4K, L-6F |
| Del Norte Intl (MMAN) ATIS 127.55 (1300-0300Z‡) Monterrey App 119.75 120.4 Tower 118.6 | H-7B, L-20G |
| Durango Intl (MMDO) ATIS 132.1 Tower 118.1 Durango Info 122.3 | H-7A |
| General Abelardo L Rodriguez Intl (MMTJ) ATIS 127.9 Tijuana App Con 119.5 120.3 Tijuana Tower 118.1 Tijuana Cinc Del 122.35 Tijuana Info 132.1 | H-4H, L-4H |
| General Lucio Blanco Intl (MMRX) Reynosa App Con 118.8 Reynosa Tower 118.8 | H-7B, L-20H |
| General Mariano Escobedo Intl (MMMY) ATIS 127.7 Monterrey App Con 119.75 120.4 Monterrey Tower 118.1 Gnd Con 121.9 | H-7B, L-20G |
| General R Fierro Villalobos Intl (MMCU) ATIS 127.9 Chihuahua App Con 121.0 Chihuahua Tower 118.4 | L-6I |
| General Rodolfo Sanchez Taboada Intl (MMML) ATIS 127.6 Mexicali App Con 118.2 Mexicali Tower 118.2 Mexicali Info 123.9 122.3 | H-4H, L-4J, 5A |
| General Servando Canales Intl (MMMA) Matamoros App Con 118.0 Matamoros Tower 118.0 | H-7C, L-21A |
| Plan De Guadalupe Intl (MMIO) Saltillo App Con 127.4 Saltillo Tower 118.4 | H-7B |
| Quetzalcoatl Intl/Nuevo Laredo Intl (MMNL) Nuevo Laredo App Con 118.3 Nuevo Laredo Tower 118.3 | H-7B, L-20G |
| Torreón Intl (MMTC) App Con 119.6 Tower 118.5 | H-7A |





In support of the Federal Aviation Administration's Runway Incursion Program, selected towered airport diagrams have been published in the Airport Diagram section of the A/FD. Diagrams will be listed alphabetically by associated city and airport name. Airport diagrams, depicting runway and taxiway configurations, will assist both VFR and IFR pilots in ground taxi operations. The airport diagrams in this publication are the same as those published in the U.S. Terminal Procedures Publications. For additional airport diagram legend information see the U.S. Terminal Procedures Publication.


NOTE: Some text data published under the individual airport in the front portion of the A/FD may be more current than the data published on the Airport Diagrams. The airport diagrams are updated only when significant changes occur.

GENERAL INFORMATION

PILOT CONTROLLED AIRPORT LIGHTING SYSTEMS

Available pilot controlled lighting (PCL) systems are indicated as follows:




1. Approach lighting systems that bear a system identification are symbolized using negative symbology, e.g., , , .
2. Approach lighting systems that do not bear a system identification are indicated with a negative "0"  beside the name.

A star (★) indicates non-standard PCL, consult the individual airport in the front portion of the A/FD, e.g., ★.

To activate lights use frequency indicated in the communication section of the chart with a  or the appropriate lighting system identification e.g., UNICOM 122.8 , , .

| <u>KEY MIKE</u> | <u>FUNCTION</u> |
|--------------------------|---|
| 7 times within 5 seconds | Highest intensity available |
| 5 times within 5 seconds | Medium or lower intensity (Lower REIL or REIL-off) |
| 3 times within 5 seconds | Lowest intensity available (Lower REIL or REIL-off) |

CHART CURRENCY INFORMATION

FAA procedure amendment number  Amdt 11A 99365  Date of latest change
 Orig 00365

The Chart Date identifies the Julian date the chart was added to the volume or last revised for any reason. The first two digits indicate the year, the last three digits indicate the day of the year (001 to 365/6) in which the latest addition or change was first published.

The Procedure Amendment Number precedes the Chart Date, and changes any time instrument information (e.g., DH, MDA, approach routing, etc.) changes. Procedure changes also cause the Chart Date to change.

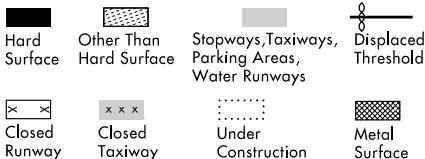
MISCELLANEOUS

- ★ Indicates a non-continuously operating facility, see the individual airport in the front portion of the A/FD.
- # Indicates control tower temporarily closed UFN.

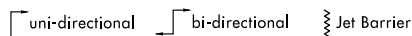
INSTRUMENT APPROACH PROCEDURES (CHARTS)

AIRPORT DIAGRAM/AIRPORT SKETCH

Runways

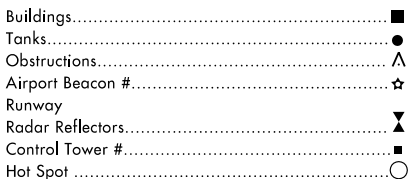


ARRESTING GEAR: Specific arresting gear systems; e.g., BAK12, MA-1A etc., shown on airport diagrams, not applicable to Civil Pilots. Military Pilots refer to appropriate DOD publications.



ARRESTING SYSTEM

REFERENCE FEATURES



When Control Tower and Rotating Beacon are co-located, Beacon symbol will be used and further identified as TWR.

Runway length depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.

A symbol is shown to indicate runway declared distance information available, see appropriate A/FD, Alaska or Pacific Supplement for distance information.

Runway Weight Bearing Capacity/or PCN Pavement Classification Number is shown as a codified expression.

Refer to the appropriate Supplement/Directory for applicable codes e.g., RWY 14-32 PCN 80 F/D/X/U S-75, D-185, 2S-175, 2D-325

Helicopter Alighting Areas
Negative Symbols used to identify Copter Procedures landing point.....

Runway Threshold elevation.....THRE 123

Runway TDZ elevation.....TDZE 123

Runway Slope.....0.3% DOWN
(shown when runway slope is greater than or equal to 0.3%)

NOTE:

Runway Slope measured to midpoint on runways 8000 feet or longer.

U.S. Navy Optical Landing System (OLS) "OLS" location is shown because of its height of approximately 7 feet and proximity to edge of runway may create an obstruction for some types of aircraft.

Approach light symbols are shown in the Flight Information Handbook.

Airport diagram scales are variable.

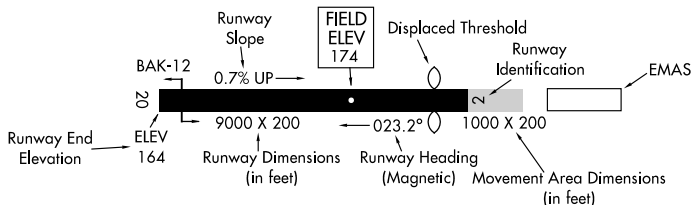
True/magnetic North orientation may vary from diagram to diagram

Coordinate values are shown in 1 or 1/2 minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.

Positional accuracy within ± 600 feet unless otherwise noted on the chart.

NOTE:

All new and revised airport diagrams are shown referenced to the World Geodetic System (WGS) (noted on appropriate diagram), and may not be compatible with local coordinates published in FLIP. (Foreign Only)



SCOPE

Airport diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations and provide information for updating Computer Based Navigation Systems (I.E., INS, GPS) aboard aircraft. Airport diagrams are not intended to be used for approach and landing or departure operations. For revisions to Airport Diagrams: Consult FAA Order 7910.4.

HOT SPOTS

An "Airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or polygons designated as "HS 1", "HS 2", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

| CITY/AIRPORT | HOT SPOT | DESCRIPTION |
|--|----------|---|
| IOWA | | |
| CEDAR RAPIDS THE EASTERN IOWA (CID) | HS 1 | Twy A crosses Rwy 13–31. Twy A is used frequently by vehicles and acft to transition to and from the west hangar/FBO area. |
| | HS 2 | Intersection of Rwy 13–31 and Rwy 09–27. |
| | HS 3 | Twy C becomes Twy A on the north side of the apch end of Rwy 27. Acft taxiing from the east hangars to Rwy 09 and Rwy 13 are required to cross Rwy 09–27. |
| DES MOINES DES MOINES INTS (DSM) | HS 1 | Westbound tfc on Twy B must remain alert so as to not miss the right turn onto Twy D when taxiing to Rwy 13. Comply with rwy hold signs, sfc painted signs and elevated rwy guard lgts at the intersection of Twy B and Rwy 13–31. |
| | HS 2 | Use caution and comply with the signs and markings when taxiing near this complex intersection. |
| | HS 3 | The apch end of Rwy 5 at Twy P has limited visibility from the twr. |
| | HS 4 | Iowa ANG complex is located north of Twy D on the northwest part of the arpt. Vehicle movement in this area is obstructed from the tower's view. Be vigilant for vehicles while taxiing in the area. |
| DUBUQUE DUBUQUE RGNL (DBQ) | HS 1 | Use caution when taxiing to Rwy 18 or Rwy 13 via Twy A. Comply with rwy hold signs, sfc painted signs and elevated rwy guard lgts at the intersection of Twy A and Rwy 18–36. |
| | HS 2 | Use caution exiting the ramp area on Twy D. Twy D crosses Rwy 13–31 immediately after leaving ramp area. |
| | HS 3 | Use caution exiting the ramp area on Twy C. Twy C crosses Rwy 13–31 immediately after leaving ramp area. |
| FORT DODGE FORT DODGE RGNL (FOD) | HS 1 | Westbound tfc on Twy B must remain alert at the intersection where Twy B splits with Twy D. Holding position markings for Rwy 06–24 and Rwy 12–30 are immediately after the twy split. |
| MASON CITY MASON CITY MUNI (MCW) | HS 1 | Single twy leads to the apch end of Rwy 30 and Rwy 35. When departing northbound, cross check compass on rwy to verify use of correct rwy for departure. Approximately half of Rwy 12 and Rwy 18 are not mutually visible due to rising terrain and trees located between rwys. Use caution when operating on either Rwy 12 or Rwy 18 for crossing tfc. Broadcast your position and intentions on CTAF. |
| SIOUX CITY SIOUX GATEWAY/ COLONEL BUD DAY FIELD (SUX) | HS 1 | Rwy 17–35 and Rwy 13–31 intersect at Twy B. When departing northbound, cross check compass on rwy to verify use of correct rwy for departure. |
| | HS 2 | Twy A and Twy G are located in the movement area near the apch end of Rwy 31. Do not traverse from Twy A to Twy G or visa versa without ATC authorization. |

| | | | |
|---------------------|------|--|---|
| WATERLOO | | | |
| WATERLOO RGNL (ALO) | HS 1 | | The intersection of Twy B and Twy C outbound holding position markings for Rwy 12–30 and Rwy 18–36 are immediately after the split of Twy B and Twy C. |
| | HS 2 | | Twy A crosses the apch end of Rwy 36 prior to Rwy 06. When departing northbound, cross check compass on rwy to verify use of correct rwy for departure. |
| | HS 3 | | Use caution exiting the ramp area on Twy B. Twy B intersects Rwy 06–24 immediately after leaving ramp area. |
| | HS 4 | | Use caution when crossing Rwy 12–30 on Twy A inbound and outbound. Twy A is used as a pass through twy to the ANG hangar and Rwy 06–24. |

KANSAS

| | | | |
|--------------------------------|------|--|--|
| DODGE CITY | | | |
| DODGE CITY RGNL (DDC) | HS 1 | | Ramp is in close proximity to rwys. |
| GARDEN CITY | | | |
| GARDEN CITY RGNL (GCK) | HS 1 | | Twy C intersects Rwy 12–30 1300' from apch end. Back taxi clearance required for full length departure on Rwy 12. |
| | HS 2 | | Use caution exiting the ramp area on Twy C. Twy C crosses Rwy 17–35 immediately after leaving ramp area. Pilots must use caution when exiting the rwy on Twy C, as the non-movement area boundary is on the twy prior to the ramp. |
| | HS 3 | | While taxiing southbound on Twy A to Rwy 30, left turn on Twy B required to reach approach end of Rwy 30. If pilot is not extra vigilant, it is easy for an acft to miss the turn on Twy B and cross the active rwy. |
| HUTCHINSON | | | |
| HUTCHINSON MUNI (HUT) | HS 1 | | Twy A and Twy C intersect with multiple rwys. |
| | HS 2 | | Twy B hold markings for Rwy 04 and Rwy 35 are very close. Use caution to hold short at proper hold marking. |
| LIBERAL | | | |
| LIBERAL MID-AMERICA RGNL (LBL) | HS 1 | | After leaving main ramp on Twy A northbound, use caution for ttc ldg Rwy 22. Rwy 22 rwy boundary marking is on Twy A prior to the left turn on Twy B. Twy B is an extension of the Rwy 22 overrun. Rwy 17 rwy boundary is on Twy A past Twy B. Use caution for close proximity apch ends of Rwy 17 and Rwy 22. |
| | HS 2 | | Use caution exiting the ramp area on Twy C. Twy C intersects Rwy 17–35 immediately after leaving ramp area. Pilots must use caution when exiting the ramp and the rwy on Twy C, as Twy C is identified with blue reflectors. |
| MANHATTAN | | | |
| MANHATTAN RGNL (MHK) | HS 1 | | Use caution when taxiing to/from the terminal area via Twy D. Twy D is the primary entrance and exit from the main ramp and is in close proximity to Rwy 03–21. |
| | HS 2 | | Use caution when taxiing northeast on Twy A to the east ramp. Do not mistake Rwy 13–31 for Twy E. |
| OLATHE | | | |
| JOHNSON CO EXECUTIVE (OJC) | HS 1 | | Twy C crosses the apch end of Rwy 18. |
| | HS 2 | | Acft on the east side of the rwy taxiing to Rwy 36 utilizing Twy B, cross Rwy 18–36. Rwy holding position marking is not fully visible until after marking the westbound turn. |
| OLATHE | | | |
| NEW CENTURY AIRCENTER (IXD) | HS 1 | | Complex twy configuration at and near the apch end of Rwy 18. Intersection of Twy C and Twy B is in the Rwy Safety Area for Rwy 18–36. |
| | HS 2 | | Twy A is in close proximity to U.S. Army Reserve ramp area. |
| | HS 3 | | Complex intersection of Twy A and Twy F, along with Rwy 04–22 and Rwy 18–36. Additionally, acft southwest of this area may not be visible from the ATCT. |

| | | |
|--|------|---|
| SALINA SALINA MUNI (SLN) | HS 1 | Twy E crossing Rwy 17–35 is active with student pilot midfield departures. Note the elevated rwy guard lgts located on the east side of Rwy 17–35 at Twy E. |
| | HS 2 | Tfc ldg Rwy 12 use caution when exiting onto Twy B. Hold line for Rwy 17–35 approaches quickly. Note the elevated rwy guard lgts located on the west side of Rwy 17–35 on Twy B. |
| TOPEKA FORBES FIELD (FOE) | HS 1 | Southbound tfc on Twy A must remain alert so as to not miss the right turn on Twy A when taxiing to Rwy 03. Twy D continues to an intersection with Rwy 03. Twy A turns to the southwest. |
| | HS 2 | Use caution Twy A becomes Twy E just past access to the apch end of Rwy 03. Twy A turns left, Twy E continues southwest bound to the KS ANG ramp. |
| | HS 3 | Twy E is not visible from the ATCT. Twy E also accesses KS ANG ramp and is not maintained by the Airport Authority. |
| TOPEKA PHILIP BILLARD MUNI (TOP) | HS 1 | Twy A and Twy D intersect inside of the Runway Safety Area for Rwy 04–22. Twy A intersects Rwy 04–22 at two different locations. |
| WICHITA WICHITA MID-CONTINENT (ICT) | HS 1 | Twy R exits Air Carrier Gates & Ramps. Acft may enter Twy R from different directions at different angles. |
| | HS 2 | Twy B crosses or intersects all rwys. Intersection with Rwy 14–32 can be confusing. |
| | HS 3 | Twy K and Twy C complex on west side of the Air Carrier Ramp leads to Twy K1 intersection with Rwy 14–32 which is a common intersection departure point. |

MINNESOTA

| | | |
|-----------------------------------|------|---|
| DULUTH DULUTH INTL (DLH) | HS 1 | Acft/vehicular tfc on Twy E1, Twy E2 and Twy E should be alert. Signage indicates Rwy 27 APCH. Twy E is in the safety area for Rwy 09–27. |
| | HS 2 | Apch end of Rwy 27 located at Twy A5. |
| | HS 3 | Complex intersection. Be alert when taxiing to Rwy 21 via Twy A and Twy C. |
| MINNEAPOLIS CRYSTAL (MIC) | HS 1 | Short distance between rwys. Manage your taxi speed. |
| | HS 2 | Short distance between rwys. Manage your taxi speed. |
| | HS 3 | Short distance between rwys. Manage your taxi speed. |
| | HS 4 | Be prepared to hold short of Rwy 06R (sod) on Twy F. |
| | HS 5 | Be prepared to hold short of Rwy 24L (sod) on Twy D. |
| | HS 6 | Multiple vehicle/pedestrian deviations have occurred in this area due to proximity of arpt access points and hangars obscuring twr view. |
| | HS 7 | Close proximity of Rwy 14R and Rwy 06R hold markings at Twy A and Twy E intersection. |
| MINNEAPOLIS FLYING CLOUD (FCM) | HS 8 | Acft taxiing northeast on Twy B for Rwy 24R or Rwy 24L, tend to make a right turn onto Twy E, incurring on the active rwy. |
| | HS 1 | Hold position marking/signs for Rwy 10L located 30' south of Twy A. |
| | HS 2 | Hold position marking/signs for Rwy 10L located 30' south of Twy A. |
| | HS 3 | Hold position marking/signs for Rwy 10L located 30' south of Twy A. |
| | HS 4 | Hold position marking/signs for Rwy 10L located 30' south of Twy A. |
| | HS 5 | Hold position marking/signs for Rwy 10L located 30' south of Twy A. |
| | HS 6 | Hold position marking/signs for Rwy 10L located 30' south of Twy A. |
| | HS 7 | Hold position marking/signs for Rwy 10L located 30' south of Twy A. |
| | HS 8 | Hold position marking/signs for Rwy 10L located 30' south of Twy A. |

MINNEAPOLIS

MINNEAPOLIS-ST PAUL
INTL/WOLD-CHAMBERLIAN (MSP)

| | |
|-------|---|
| HS 9 | Rwy 18 apch area proximity to adjacent ramps along Twy A. |
| HS 10 | Close proximity of parallel rwys and holding positions when crossing apch end of Rwy 28L. |
| HS 11 | Short distance between rwy hold short lines. Be prepared to hold short of each rwy. |
| HS 1 | Expansive pavement at the intersection of Twy A, Twy B, Twy C, Twy D, and Twy H in near proximity to Rwy 12R-30L and Rwy 04-22. Use caution for rwy crossings in this area. |
| HS 2 | Complex twy/rwy geometry. |
| HS 3 | Expansive pavement at the intersection of Twy C, Twy D, Twy P, and Twy Q in near proximity to Rwy 12R-30L and Rwy 04-22. Use caution for rwy crossings in this area. |
| HS 4 | Complex geometry at Rwy 04 apch end. Rwy 04 depart check compass to verify correct rwy heading. |

MISSOURI

BRANSON

BRANSON (BBG)

| | |
|------|--|
| HS 1 | Westbound tfc on Twy C must remain alert so as to not mistake Rwy 14-32 for a parallel twy. First left turn out of ramp area is Rwy 14-32. |
| HS 2 | Use caution for acft utilizing Twy E and Twy F as a turn around after ldg on Rwy 14 or taxiing to hold while waiting to depart Rwy 32. Back taxi required on Rwy 14-32 for full length departure on Rwy 32 and frequently utilized by acft ldg Rwy 14. |

CAPE GIRARDEAU

CAPE GIRARDEAU RGNL (CGI)

| | |
|------|--|
| HS 1 | Area not visible from the twr. |
| HS 2 | Acft ldg Rwy 10 sometime mistake Rwy 02-20 as Twy D. |

COLUMBIA

COLUMBIA RGNL (COU)

| | |
|------|--|
| HS 1 | Use caution approaching the intersection of Twy A and Twy B due to the close proximity of rwy holding position markings for Rwy 02-20 and Rwy 13-31. |
| HS 2 | Acft departing Rwy 20. Taxiing on Rwy 13-31 may be authorized to reach the apch end of Rwy 20. Use caution not to confuse rwy holding position marking for Rwy 13 with the marking for Rwy 20. |
| HS 3 | Acft departing Rwy 20. Rwy holding position line for Rwy 20 is on Rwy 13-31. |

FORT LEONARD WOOD

WAYNESVILLE-ST. ROBERT RGNL
FORNEY FLD (TBN)

| | |
|------|---|
| HS 1 | Arriving and departing acft must use the intersection at the southeast end of Rwy 14-32 to access the rwy. There is no parallel twy. Arriving and departing tfc may be required to back-taxi. |
|------|---|

JEFFERSON CITY

JEFFERSON CITY
MEMORIAL (JEF)

| | |
|------|--|
| HS 1 | Complex intersection of twys and rwys. Rwy 12-30 intersects with Twy B and Rwy 09-27. Acft eastbound on Twy B from Rwy 12-30, holding position markings are for Rwy 12-30. |
| HS 2 | Acft taxiing on Twy B to Rwy 27, be prepared for the holding position markings just out of the turn. |

JOPLIN

JOPLIN RGNL (JLN)

| | |
|------|--|
| HS 1 | All acft exiting the General Aviation Ramp on Twy B be prepared to hold west of Rwy 18-36 for both Rwy 18-36 and Rwy 05-23. |
| HS 2 | Twy C ramp exit is in close proximity to the rwy holding position line for Rwy 18-36. Twy C intersects with Rwy 18-36 immediately after leaving the ramp area. |

KANSAS CITY

CHARLES B. WHEELER
DOWNTOWN (MKC)

| | |
|------|--|
| HS 1 | On Twy G, holding position markings for Rwy 03-21 are unusual due to the angle that Twy G intersects with Rwy 03-21. |
|------|--|

| | | |
|--|------|---|
| | HS 2 | <p>Twy D intersects with Rwy 03–21 and Rwy 01–19. Holding position markings for Rwy 03–21 and Rwy 01–19 are within the rwy safety area for each other. Twy D is also utilized by acft and vehicles to transition from the east ramps to the west ramps. Acft/vehicles often mistake the second hold short markings when exiting Rwy 01–19 at Twy D as the hold short marking for Rwy 03–21.</p> |
| | HS 3 | <p>Twy F, Twy D, Twy L transition when acft are taxiing northbound. Acft have the tendency to miss the left turn onto Twy L to continue across Rwy 01–19. Utilize extreme caution at night and in low visibility conditions.</p> |
| KANSAS CITY KANSAS CITY INTL (MCI) | HS 1 | <p>Busy vehicle svc road crosses Twy G east of Twy B. Non-movement area begins just west of svc road.</p> |
| | HS 2 | <p>Twy E and Twy F intersection with Rwy 09–27. Immediately after crossing Twy C, both Twy E and Twy cross Rwy 09–27.</p> |
| | HS 3 | <p>Twy C and Twy D intersection with Rwy 01R–19L. Immediately after crossing Twy E, both Twy C and Twy D cross Rwy 01R–19L.</p> |
| | HS 4 | <p>The intersection of Twy B2 and Ottawa Ave. (vehicle svc road). Twy B2 is the only entrance to the general aviation ramp. This svc road is a high tfc vehicle route for airlines and cargo carriers.</p> |
| KIRKSVILLE KIRKSVILLE RGNL (IRK) | HS 1 | <p>Turf Rwy 09–27 taxi route enters Rwy 18–36 approximately 1000' south of the apch end of Rwy 18 between Twy A and Twy B.</p> |
| ST. JOSEPH, MO ROSECRANS MEMORIAL (STJ) | HS 1 | <p>Use caution exiting the ramp area on Twy B. Twy B crosses Rwy 17–35 immediately after leaving ramp area.</p> |
| | HS 2 | <p>Apch ends of Rwy 35 and Rwy 31 are both accessed via Twy A. When departing northbound, cross check compass on rwy to verify use of correct rwy for departure.</p> |
| | HS 3 | <p>Twy B intersects Rwy 13 approximately 2000' from apch end. Back taxi clearance required for full length departure on Rwy 13.</p> |
| ST. LOUIS LAMBERT-ST. LOUIS INTL. (STL) | HS 1 | <p>Use caution when approaching the intersection of Twy D and Twy L be careful not to cross the hold marking for Rwy 12R–30L without ATC authorization.</p> |
| | HS 2 | <p>Acft approaching Rwy 29 on Twy T, do not turn left on Twy A. Taxi straight ahead to Rwy 29.</p> |
| | HS 3 | <p>Acft northwest on Twy F from the FBO or cargo ramp to Rwy 12L use diligence to not miss the left turn onto Twy S. If the left turn at Twy S is missed, do not cross the hold marking for Rwy 06–24 without ATC authorization.</p> |
| ST. LOUIS SPIRIT OF ST. LOUIS (SUS) | HS 1 | <p>Northwest bound tfc on Twy B use caution entering complex intersection with Twy Z, Twy D, and Twy C. The close proximity of Twy C and Twy D, immediately after the turn onto Twy Z can be confusing.</p> |
| | HS 2 | <p>On Twy B west of the blue port-a-ports, twr can not maintain visual ctc with vehicles and small acft.</p> |
| | HS 3 | <p>On Twy B northwest of Twy A, twr can not maintain visual ctc with vehicles and acft.</p> |
| SPRINGFIELD SPRINGFIELD-BRANSON NATIONAL (SGF) | HS 1 | <p>Acft exiting the Old Terminal ramp to the west, use caution as Twy D and Twy N are in close proximity to the rwys and angles create unusual holding positions.</p> |
| | HS 2 | <p>Northeast bound tfc on Twy F must remain alert so as to not mistake Rwy 14–32 for a parallel twy. First left turn out of ramp area is Rwy 14–32.</p> |
| | HS 3 | <p>Due to large acft parked on the Air Cargo Ramp, twr may be unable to maintain visual ctc with small acft taxiing northbound on Twy U north of Twy B.</p> |

NEBRASKA

| | | |
|---|------|---|
| GRAND ISLAND CENTRAL NEBRASKA RGNL (GRI) | HS 1 | When taxiing to the apch end of Rwy 13, use caution as Twy B crosses the apch end of Rwy 17. Rwy 17 holding position markings are accompanied by rwy guard lgts on both sides of the rwy. |
| | HS 2 | Twy C crossed Rwy 17 immediately after leaving ramp area. Intersection of Rwy 17-35 and Twy C has rwy guard lgts on both sides of the rwy. |
| LINCOLN LINCOLN (LNK) | HS 1 | Rwy 18-36, Rwy 14-32 and Twy D, Twy E and Twy J all intersect with each other in a small area. Angles of intersection can make sighting tfc difficult. |
| | HS 2 | Rwy 32 apch holding position is located on Twy A, immediately past the Twy A run up area. |
| OMAHA EPPLEY AIRFIELD (OMA) | HS 1 | A complex intersection of Twy S, Twy F, and Twy B is located between Rwy 14R-32L and the intersection of Rwy 14L-32R and Rwy 18-36. |
| | HS 2 | Intersection of Twy F and Rwy 14R-32L is in close proximity to the ramp at Twy C. |
| | HS 3 | Intersection of Twy A and Rwy 18-36 is in close proximity to the ramp at Twy C. |

NORTH DAKOTA

| | | |
|---------------------------------------|------|--|
| GRAND FORKS GRAND FORKS INTL (GFK) | HS 1 | Clearance necessary to cross Rwy 09L and Twy A intersection. |
| | HS 2 | Clearance necessary to cross Rwy 17R and Twy B intersection. |

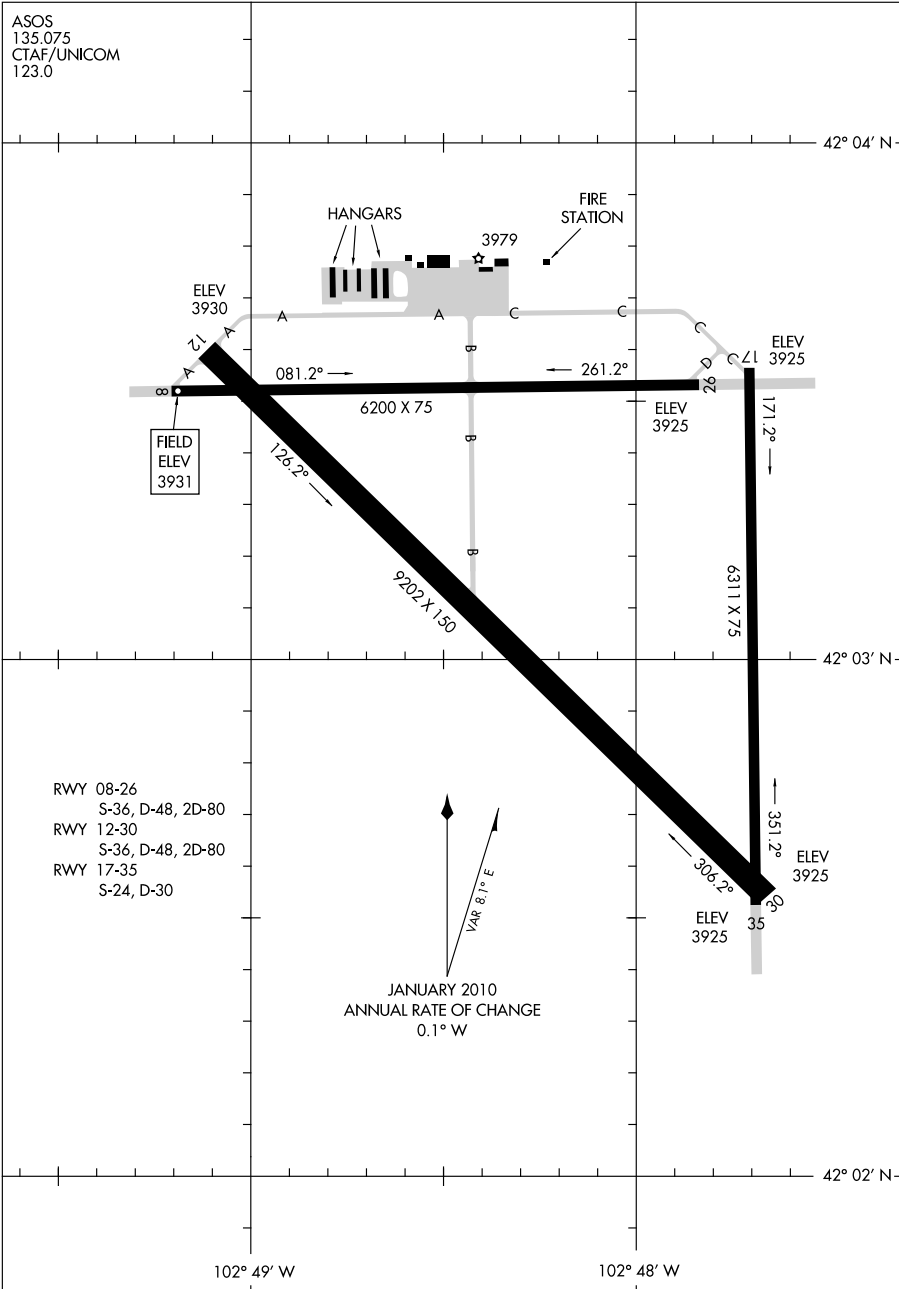
SOUTH DAKOTA

| | | |
|-------------------------------------|------|---|
| SIoux FALLS JOE FOSS FIELD (FSD) | HS 1 | Complex twy intersection in close proximity of rws. |
|-------------------------------------|------|---|

10210
AIRPORT DIAGRAM

AL-16 (FAA)

ALLIANCE MUNI (AIA)
ALLIANCE, NEBRASKA



AIRPORT DIAGRAM
10210

ALLIANCE, NEBRASKA
ALLIANCE MUNI (AIA)

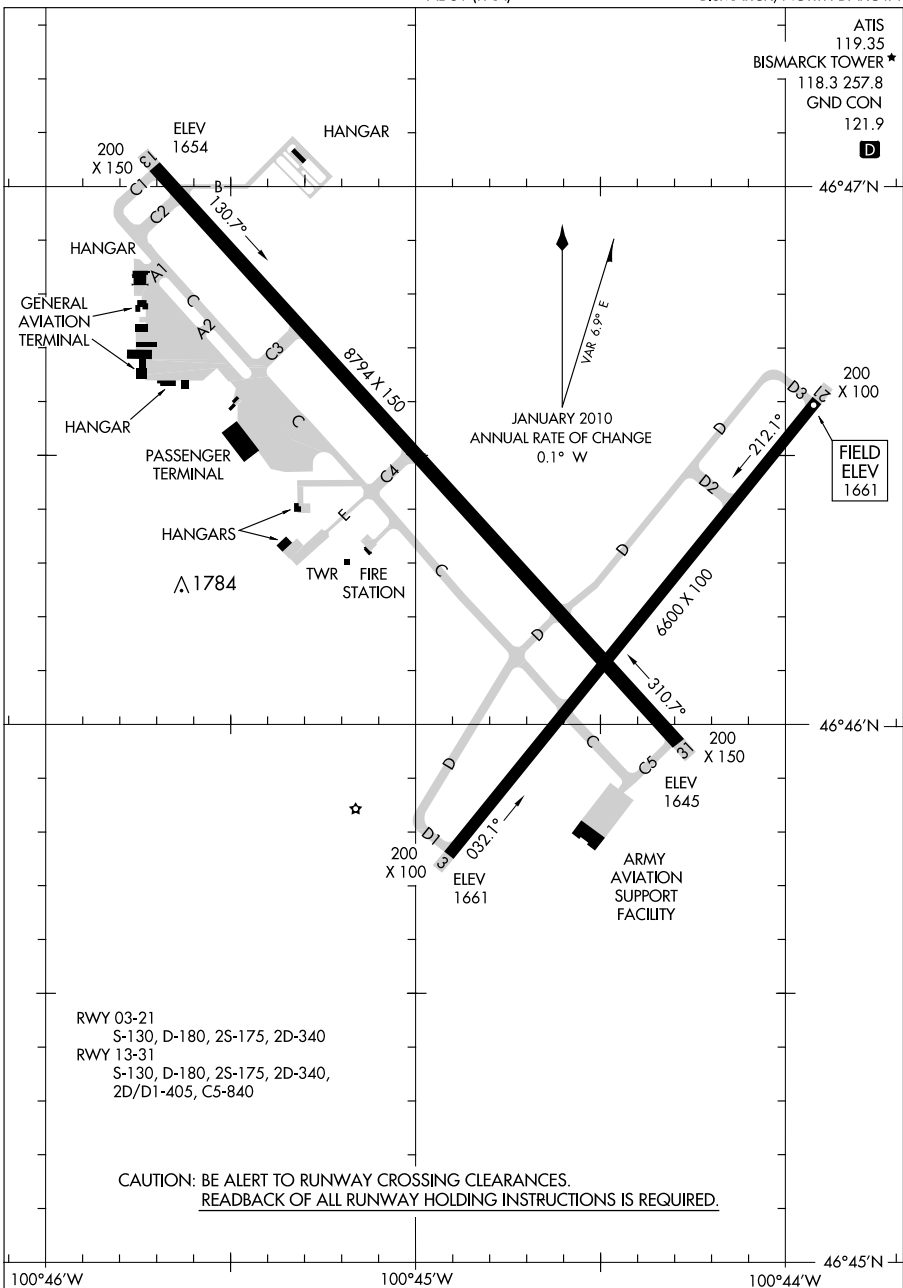
10210

AIRPORT DIAGRAM

AL-51 (FAA)

BISMARCK MUNI (BIS)

BISMARCK, NORTH DAKOTA



AIRPORT DIAGRAM

10210

BISMARCK, NORTH DAKOTA

BISMARCK MUNI (BIS)

10266

AIRPORT DIAGRAM

AL-10372 (FAA)

BRANSON (BBG)

BRANSON, MISSOURI

| | |
|----------------|----------------------------|
| ATIS | 124.625 |
| BRANSON TOWER* | 128.15 |
| GND CON | 118.4 |
| CLNC DEL | 118.4 |
| | 126.35 (When Tower Closed) |

D

- 36° 32.5' N

- 36° 32.0' N

36° 31.5' N

93° 12.5' W

93° 12.0' W

93° 11.5' W

AIRPORT DIAGRAM

10266

BRANSON, MISSOURI

BRANSON (BBG)

NC, 23 SEP 2010 to 18 NOV 2010

10210

AIRPORT DIAGRAM

BURLINGTON/SOUTHEAST IOWA RGNL (BRL)

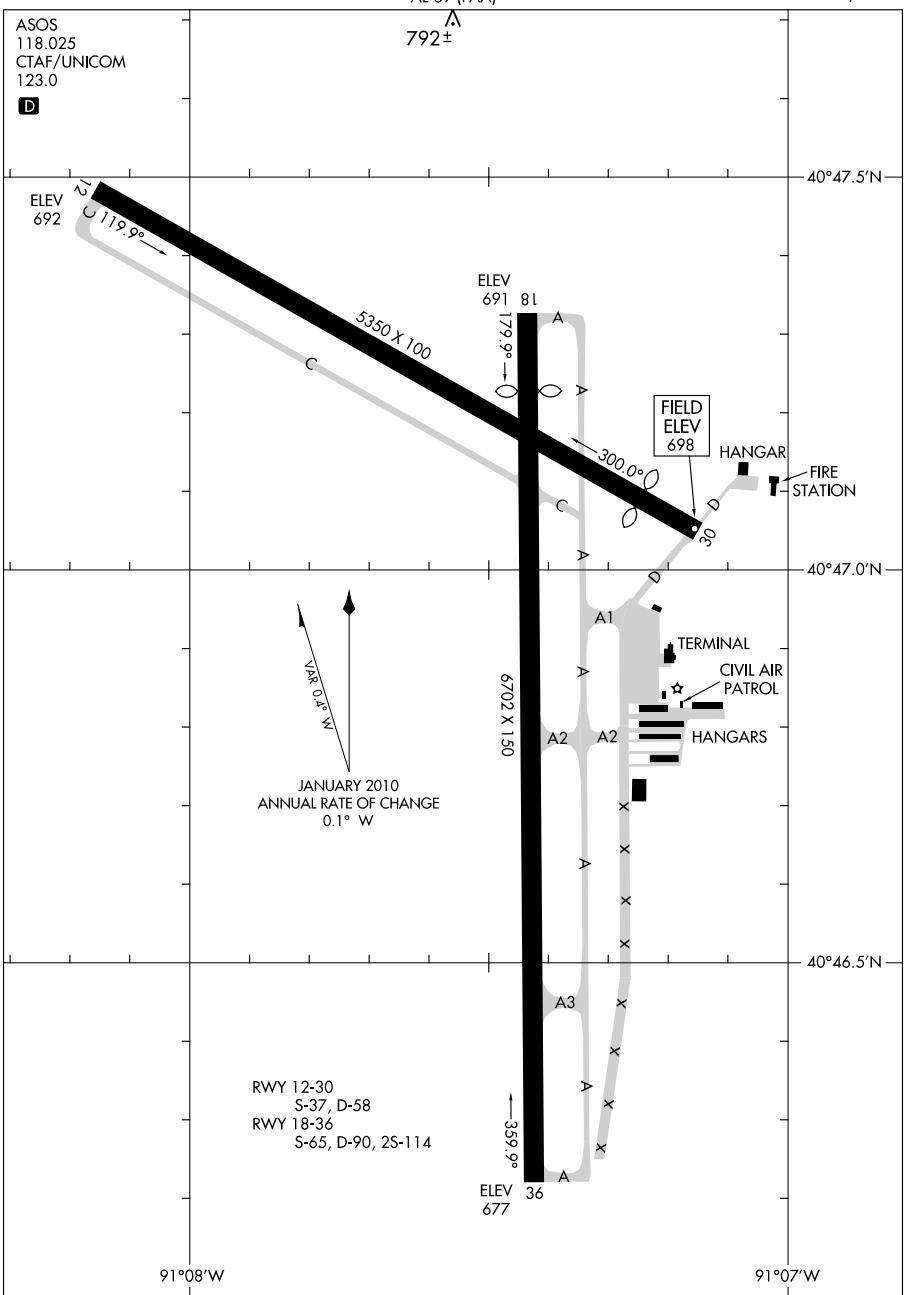
BURLINGTON, IOWA

ASOS
118.025
CTAF/UNICOM
123.0



AL-69 (FAA)

792±



AIRPORT DIAGRAM

10210

BURLINGTON, IOWA

BURLINGTON/SOUTHEAST IOWA RGNL (BRL)

10266

AIRPORT DIAGRAM

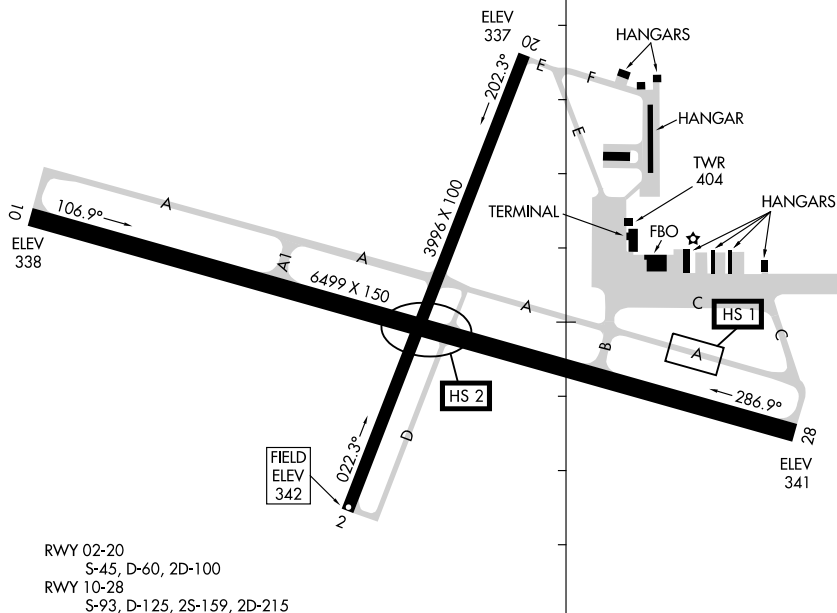
CAPE GIRARDEAU RGNL (CGI)
CAPE GIRARDEAU, MISSOURI

ASOS
120.55
CAPE GIRARDEAU TOWER ★
125.525
GND CON
121.6

AL-943 (FAA)

JANUARY 2010
ANNUAL RATE OF CHANGE
0.1° W

37°14'N

ELEV
341

37°13'N

89°34'W

AIRPORT DIAGRAM

10266

CAPE GIRARDEAU, MISSOURI
CAPE GIRARDEAU RGNL (CGI)

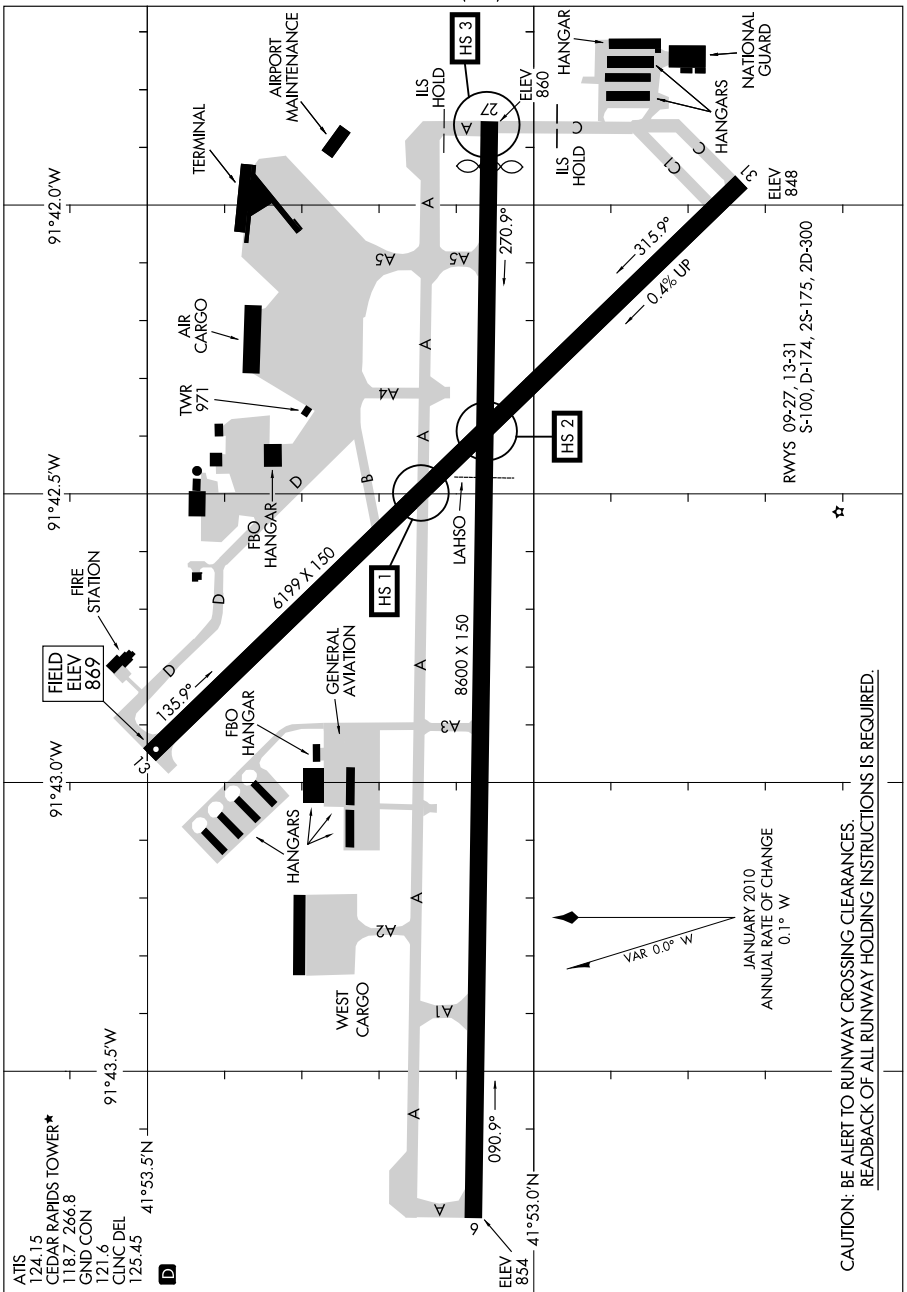
10266

AIRPORT DIAGRAM

AL-250 (FAA)

CEDAR RAPIDS/ THE EASTERN IOWA (CID)

CEDAR RAPIDS, IOWA



AIRPORT DIAGRAM

CEDAR RAPIDS, IOWA

CEDAR RAPIDS/ THE EASTERN IOWA (CID)

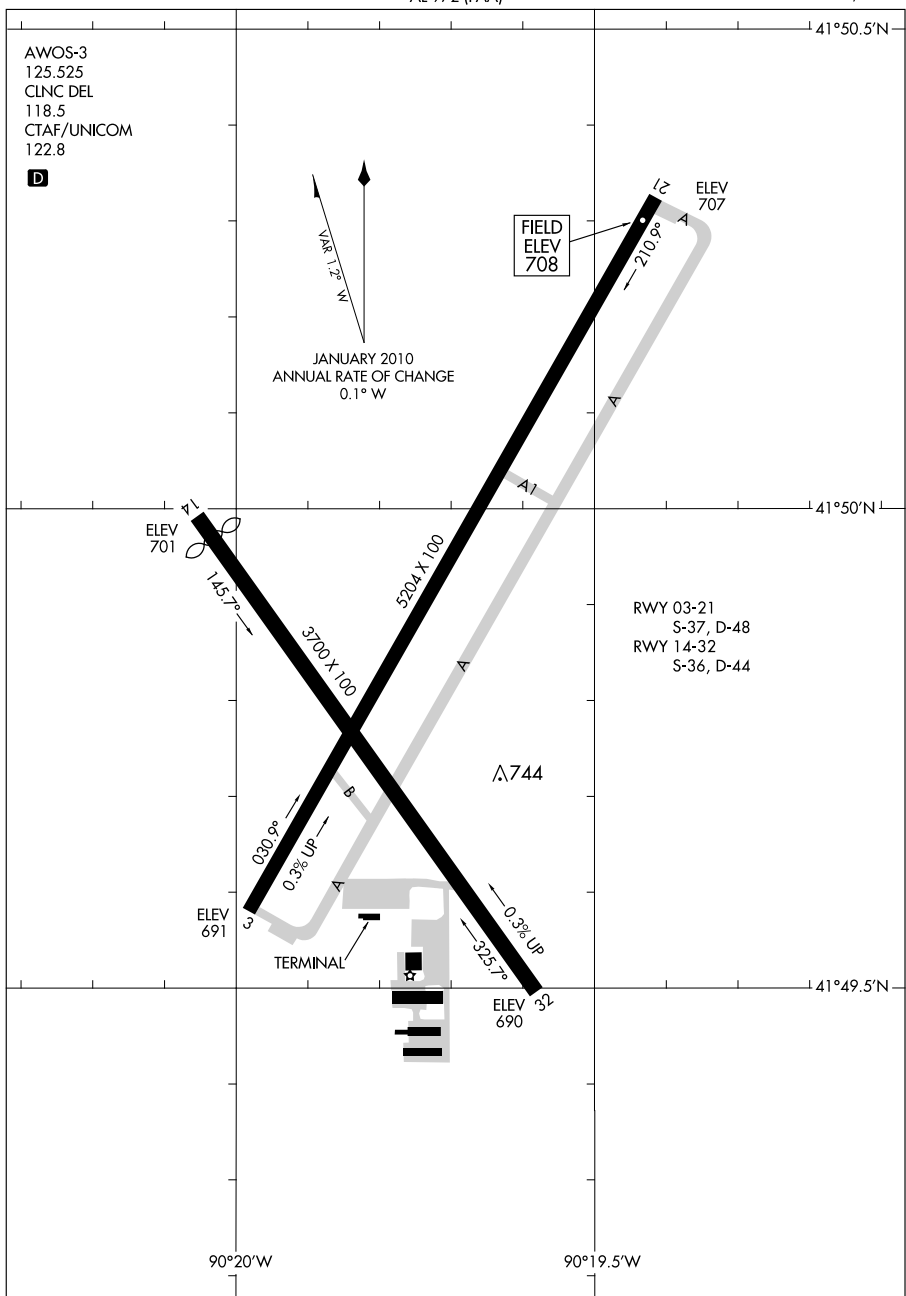
10266

10210

AIRPORT DIAGRAM

AL-972 (FAA)

CLINTON MUNI (CWI)
CLINTON, IOWA



AIRPORT DIAGRAM

10210

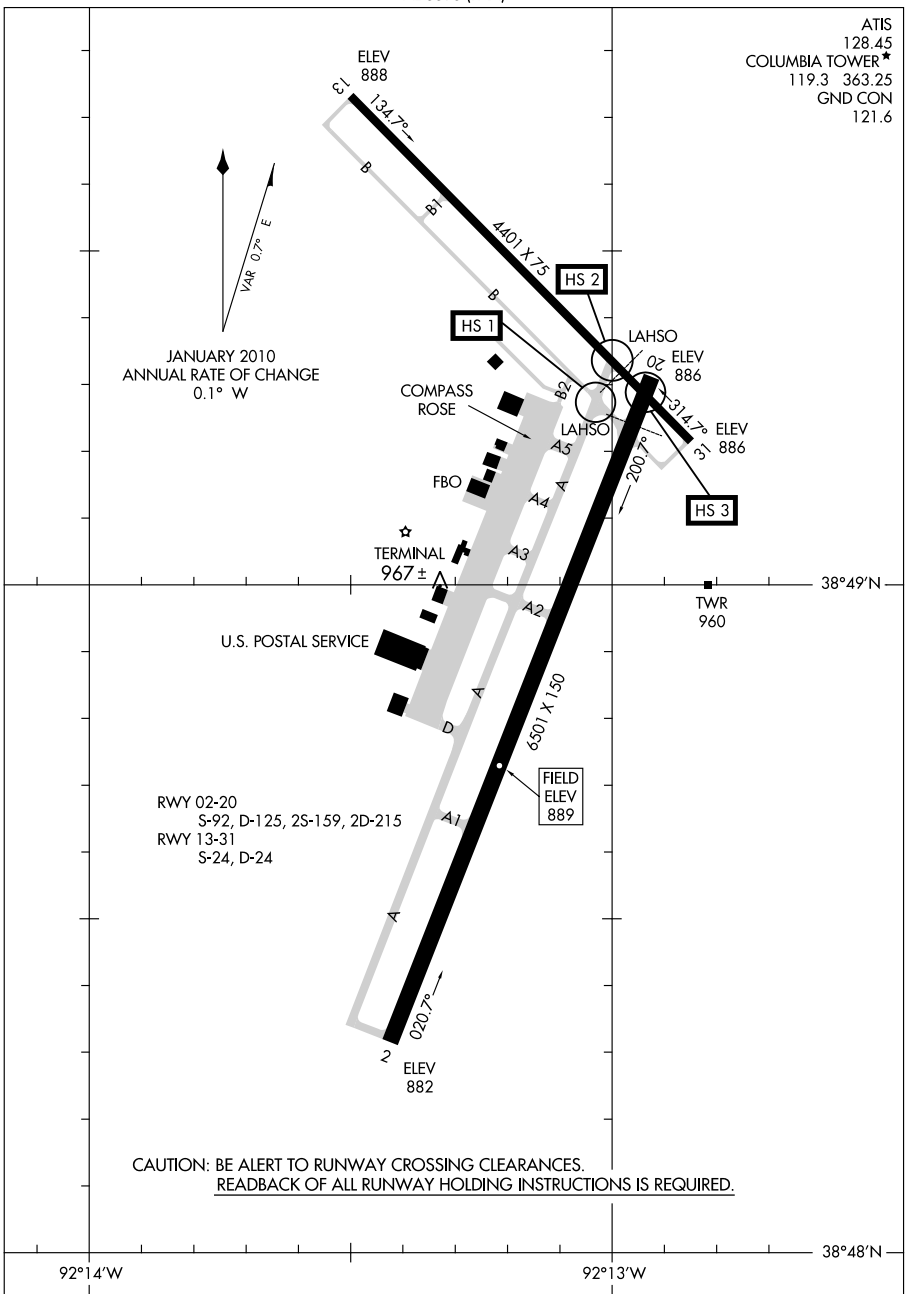
CLINTON, IOWA
CLINTON MUNI (CWI)

10266

AIRPORT DIAGRAM

AL-5595 (FAA)

COLUMBIA RGNL (COU)
COLUMBIA, MISSOURI



AIRPORT DIAGRAM

10266

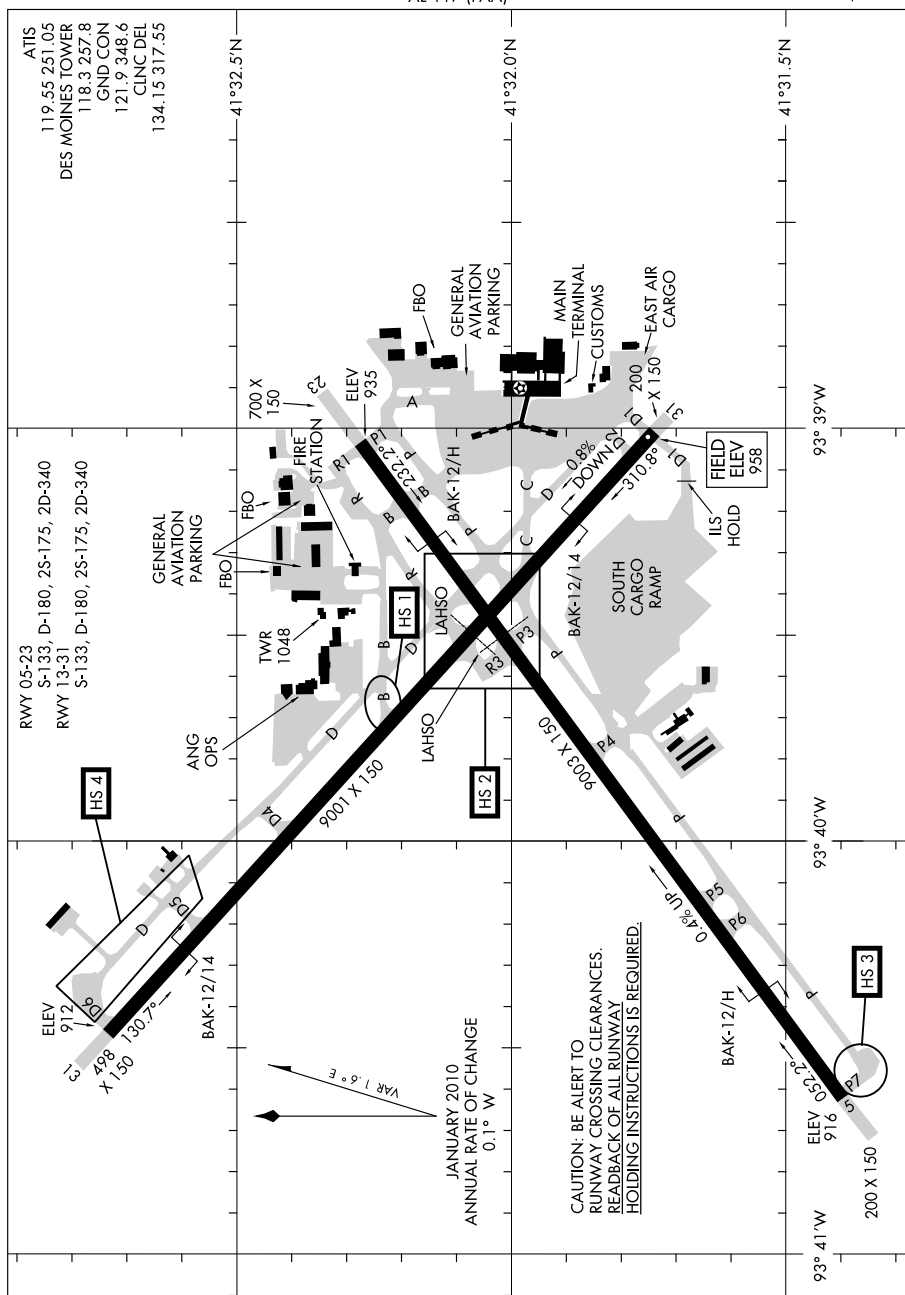
COLUMBIA, MISSOURI
COLUMBIA RGNL (COU)

NC. 23 SEP 2010 to 18 NOV 2010

AIRPORT DIAGRAM

AL-117 (FAA)

DES MOINES INTL (DSM)
DES MOINES, IOWA



AIRPORT DIAGRAM

DES MOINES, IOWA
DES MOINES INTL (DSM)

10266

NC, 23 SEP 2010 to 18 NOV 2010

10266

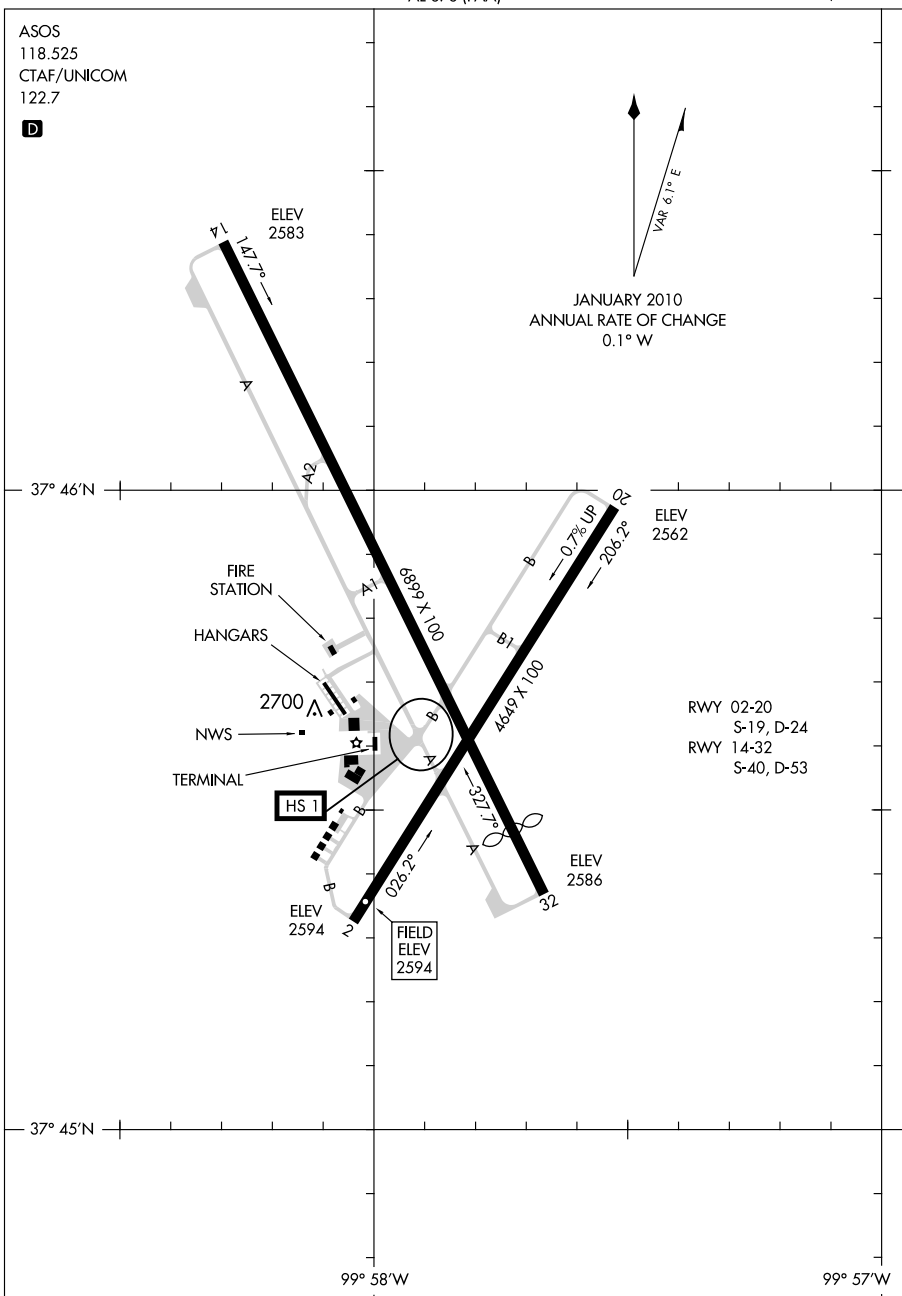
AIRPORT DIAGRAM

AL-676 (FAA)

DODGE CITY RGNL (DDC)
DODGE CITY, KANSAS

ASOS
118.525
CTAF/UNICOM
122.7

D



AIRPORT DIAGRAM

10266

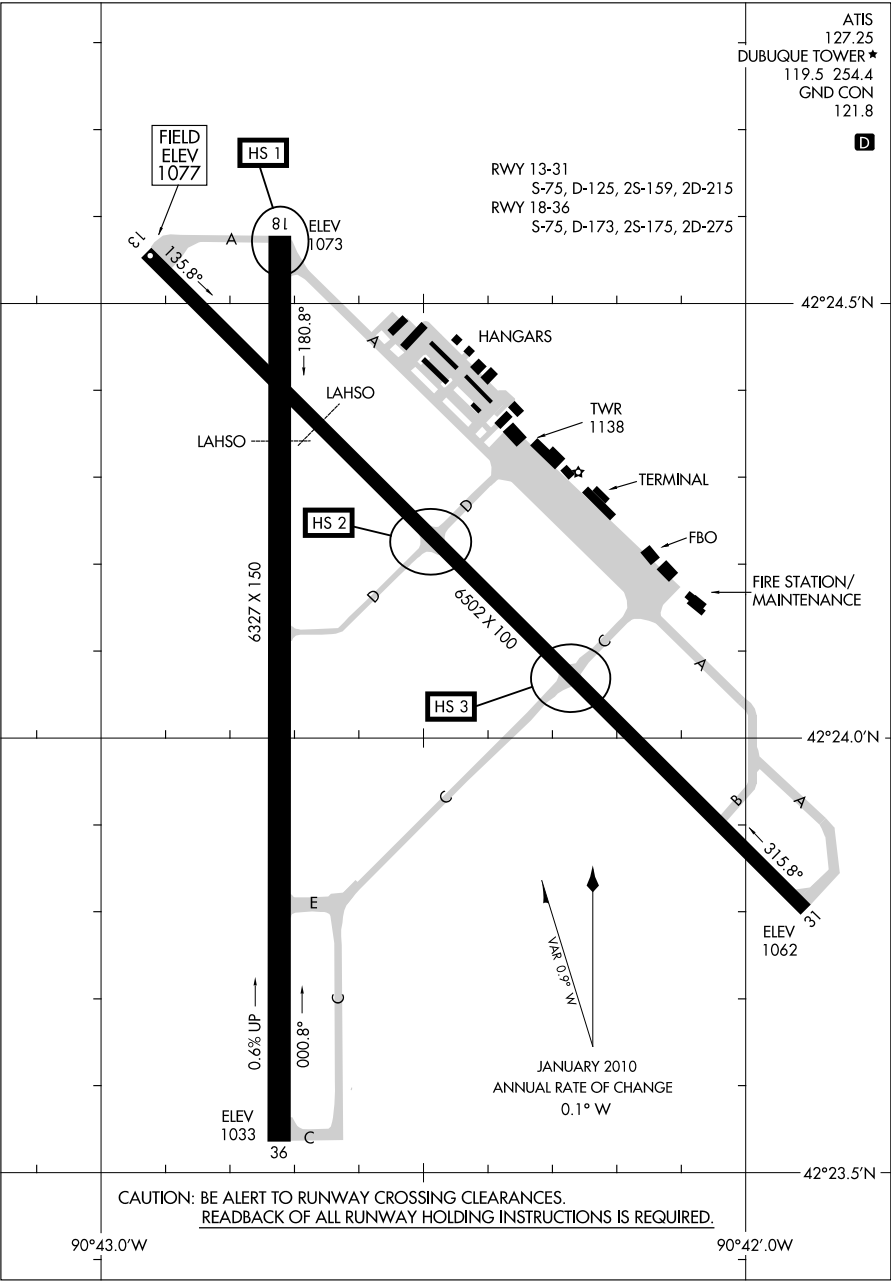
DODGE CITY, KANSAS
DODGE CITY RGNL (DDC)

NC, 23 SEP 2010 to 18 NOV 2010

AIRPORT DIAGRAM

AL-923 (FAA)

DUBUQUE RGNL (DBQ)
DUBUQUE, IOWA



AIRPORT DIAGRAM

DUBUQUE, IOWA
DUBUQUE RGNL (DBQ)

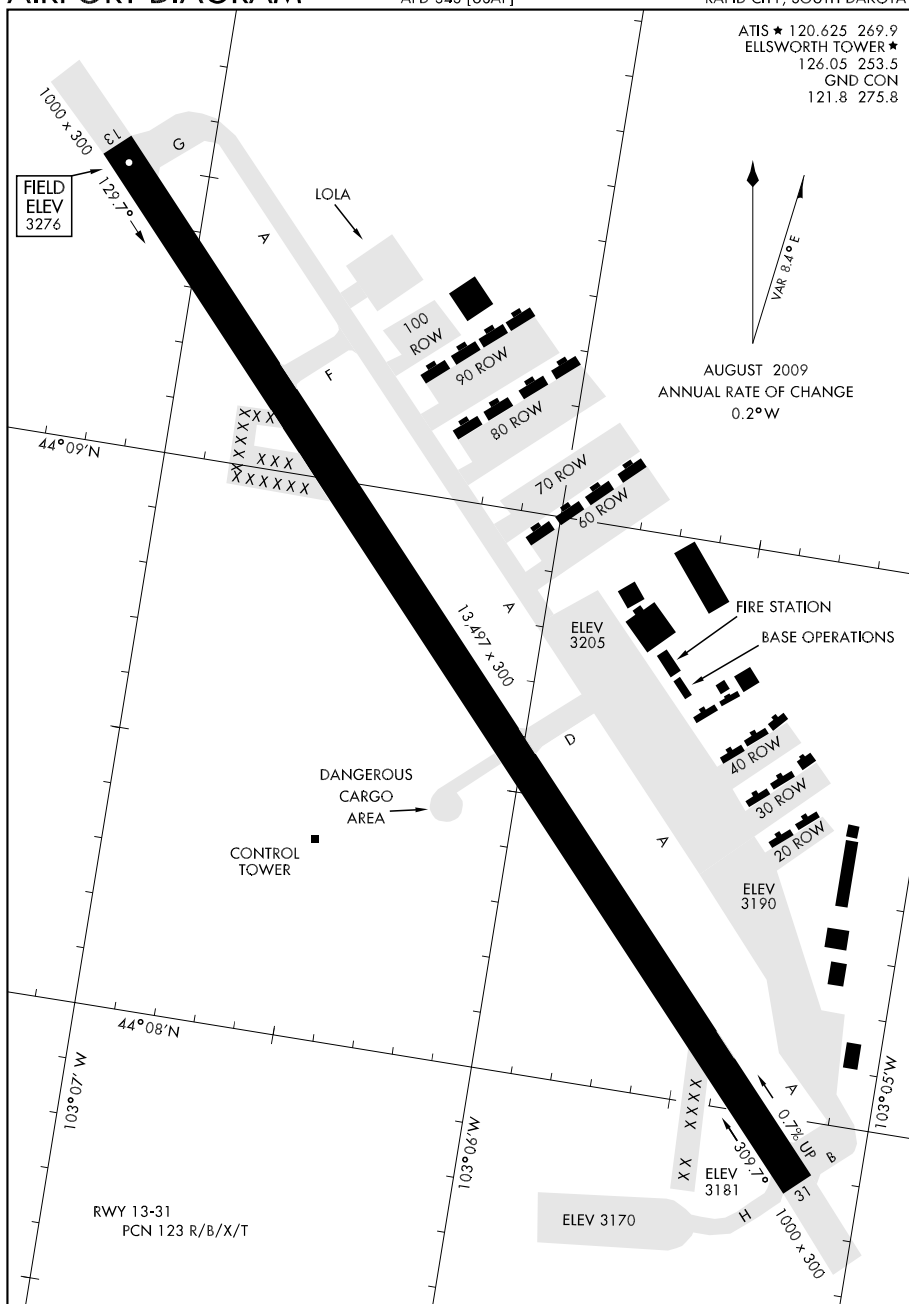
09239

AIRPORT DIAGRAM

AFD-343 [USAF]

ELLSWORTH AFB (KRCA)

RAPID CITY, SOUTH DAKOTA



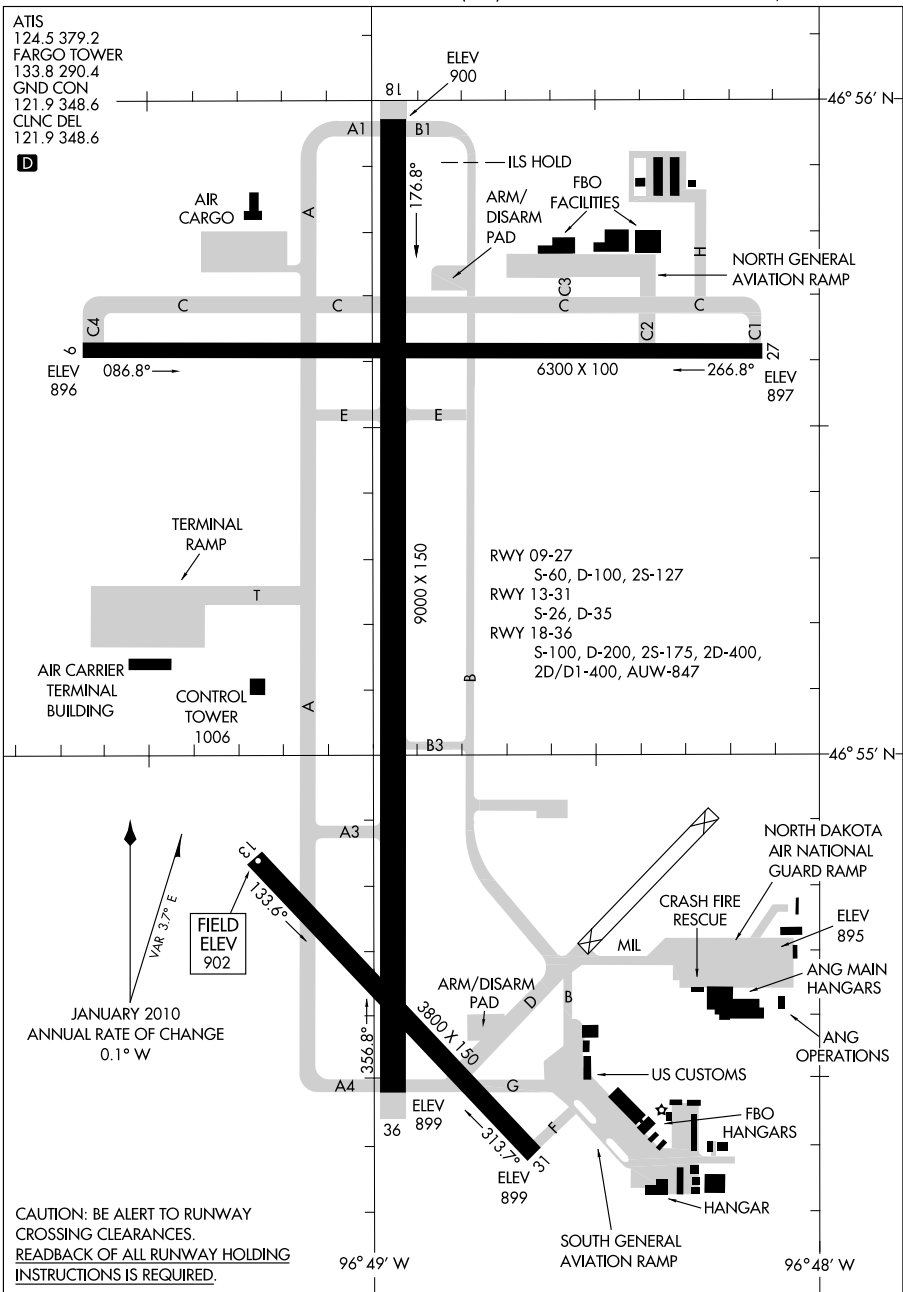
AIRPORT DIAGRAM

RAPID CITY, SOUTH DAKOTA
ELLSWORTH AFB (KRCA)

NC, 23 SEP 2010 to 18 NOV 2010

10210

AIRPORT DIAGRAM

FARGO/HECTOR INTL (FAR)
FARGO, NORTH DAKOTA

AIRPORT DIAGRAM

FARGO, NORTH DAKOTA
FARGO/HECTOR INTL (FAR)

10210

AIRPORT DIAGRAMS

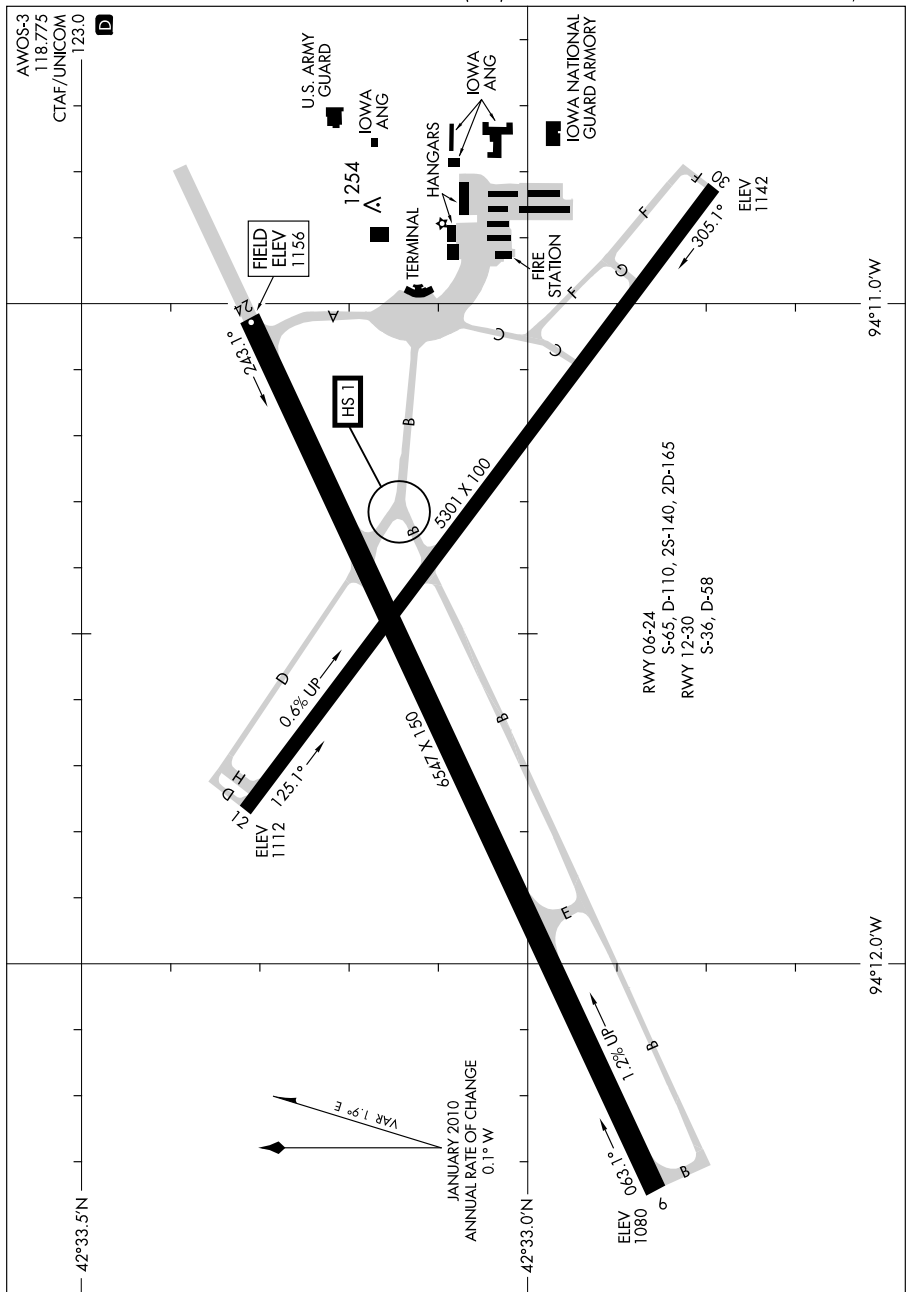
10266

AIRPORT DIAGRAM

AL-976 (FAA)

FORT DODGE RGNL (FOD)

FORT DODGE, IOWA



AIRPORT DIAGRAM

10266

FORT DODGE, IOWA

FORT DODGE RGNL (FOD)

NC. 23 SEP 2010 to 18 NOV 2010

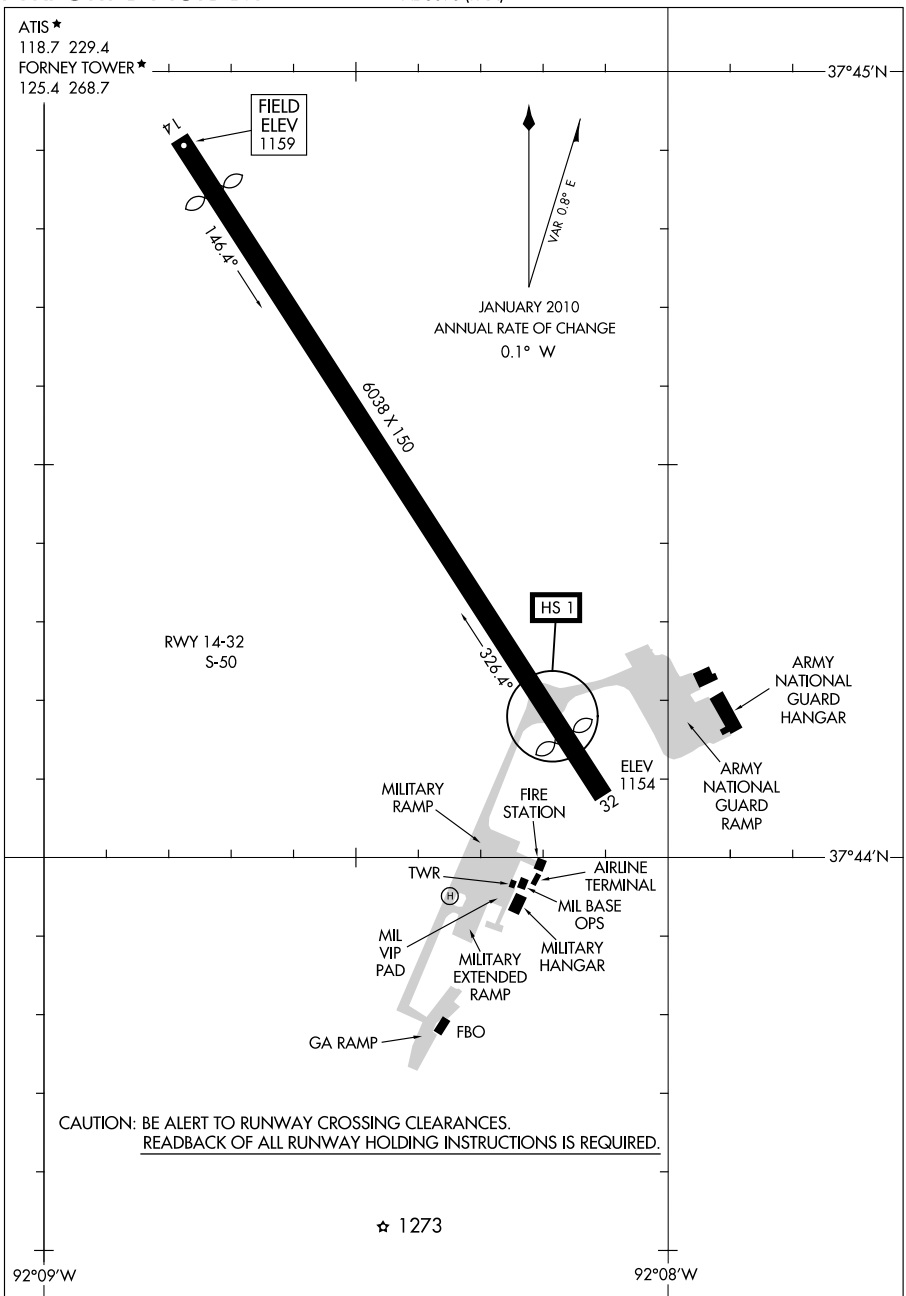
10266

AIRPORT DIAGRAM

FT. LEONARD WOOD/WAYNESVILLE-ST. ROBERT RGNL FORNEY FIELD (TBN)

AL-5093 (FAA)

FT. LEONARD WOOD, MISSOURI



AIRPORT DIAGRAM

10266

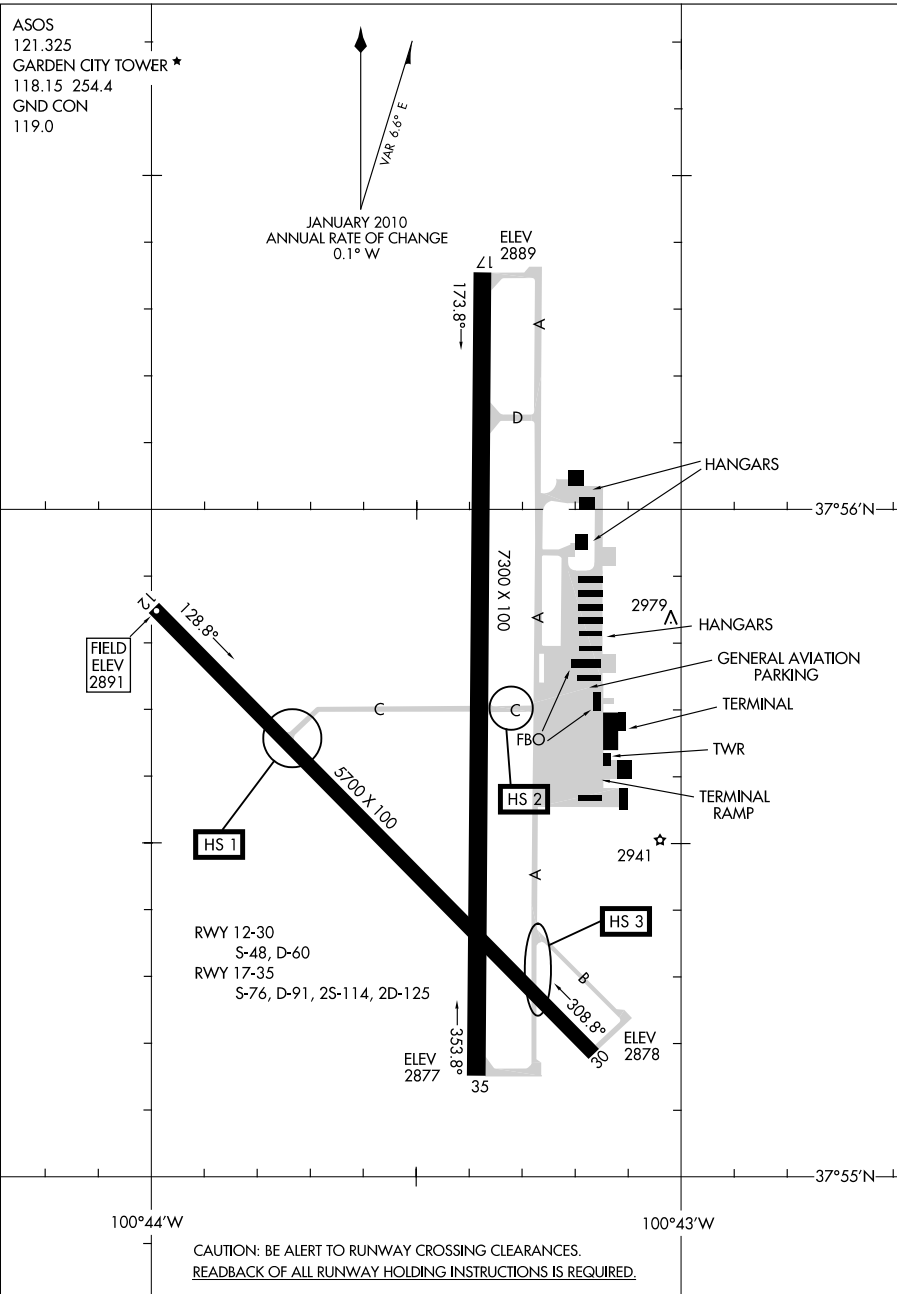
FT. LEONARD WOOD/WAYNESVILLE-ST. ROBERT RGNL FORNEY FIELD (TBN)

FT. LEONARD WOOD, MISSOURI

10266

AIRPORT DIAGRAM

GARDEN CITY RGNL (GCK)
GARDEN CITY, KANSAS



AIRPORT DIAGRAM

GARDEN CITY, KANSAS
GARDEN CITY RGNL (GCK)

10266

ASOS
121.025
CTAF/UNICOM
122.95



NC, 23 SEP 2010 to 18 NOV 2010

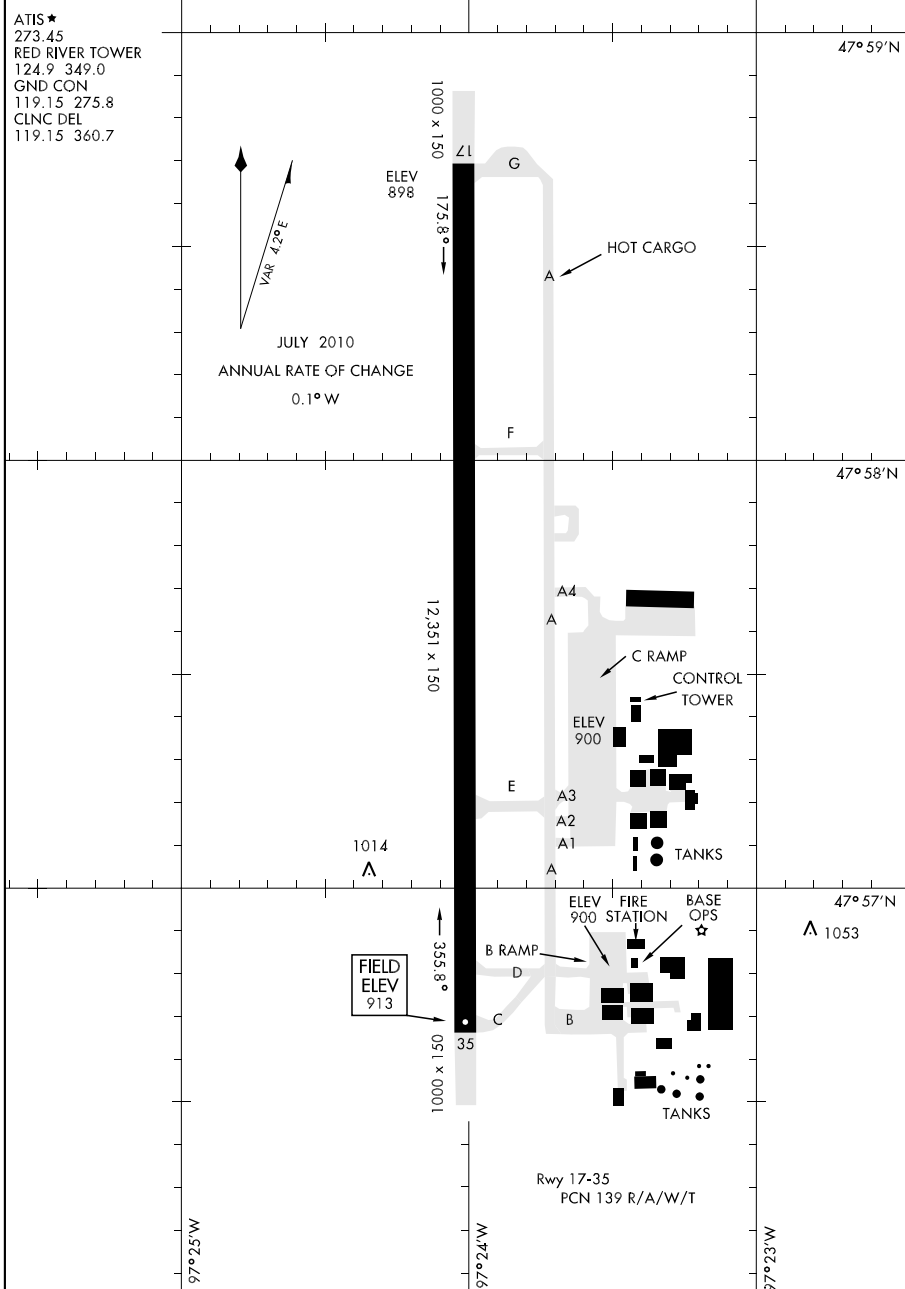
10210

AIRPORT DIAGRAM

AFD-5010 [USAF]

GRAND FORKS AFB (KRDR)

GRAND FORKS, NORTH DAKOTA



AIRPORT DIAGRAM

GRAND FORKS, NORTH DAKOTA

GRAND FORKS AFB (KRDR)

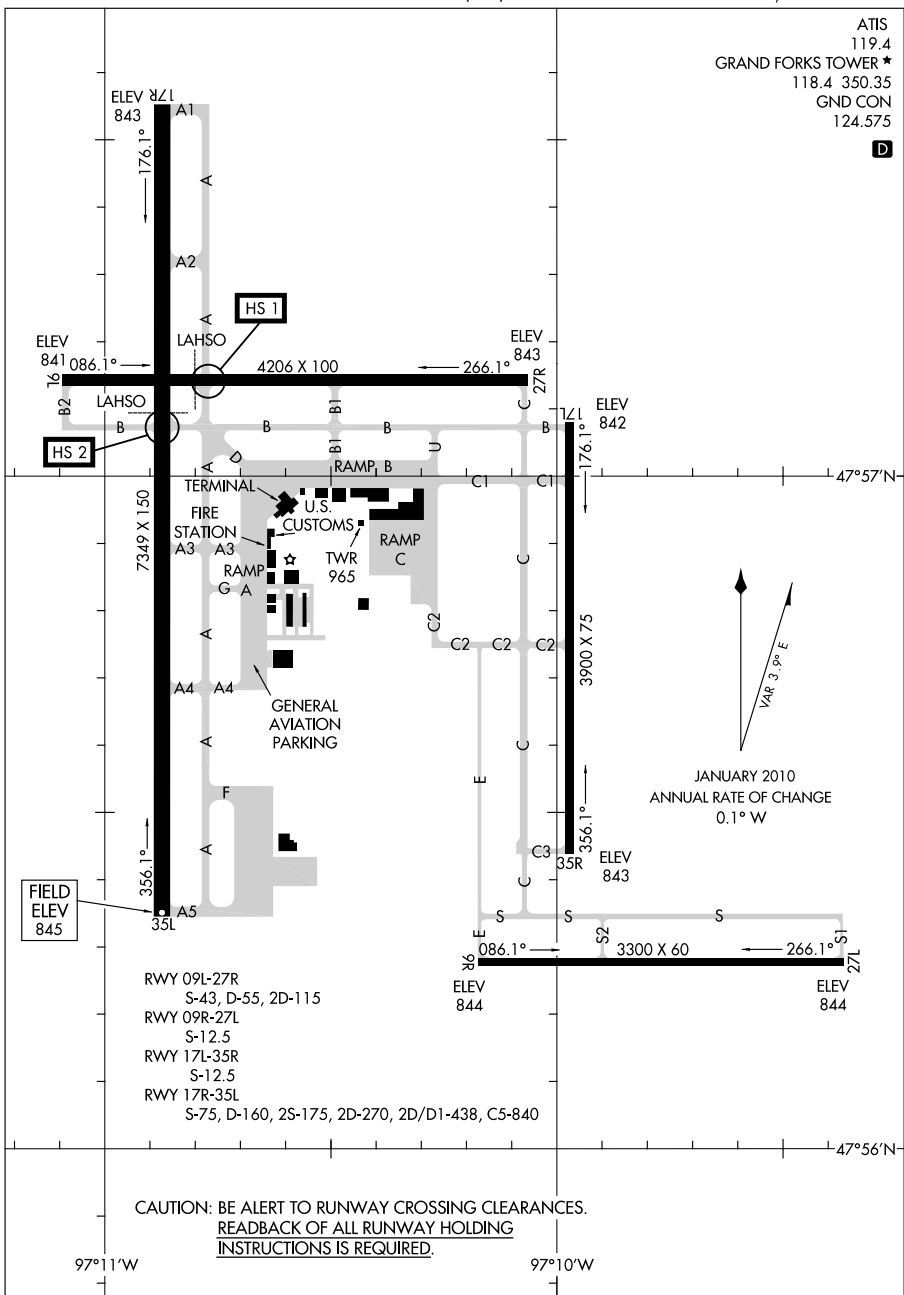
10266

AIRPORT DIAGRAM

AL-5187 (FAA)

GRAND FORKS INTL (GFK)

GRAND FORKS, NORTH DAKOTA



AIRPORT DIAGRAM

10266

GRAND FORKS, NORTH DAKOTA

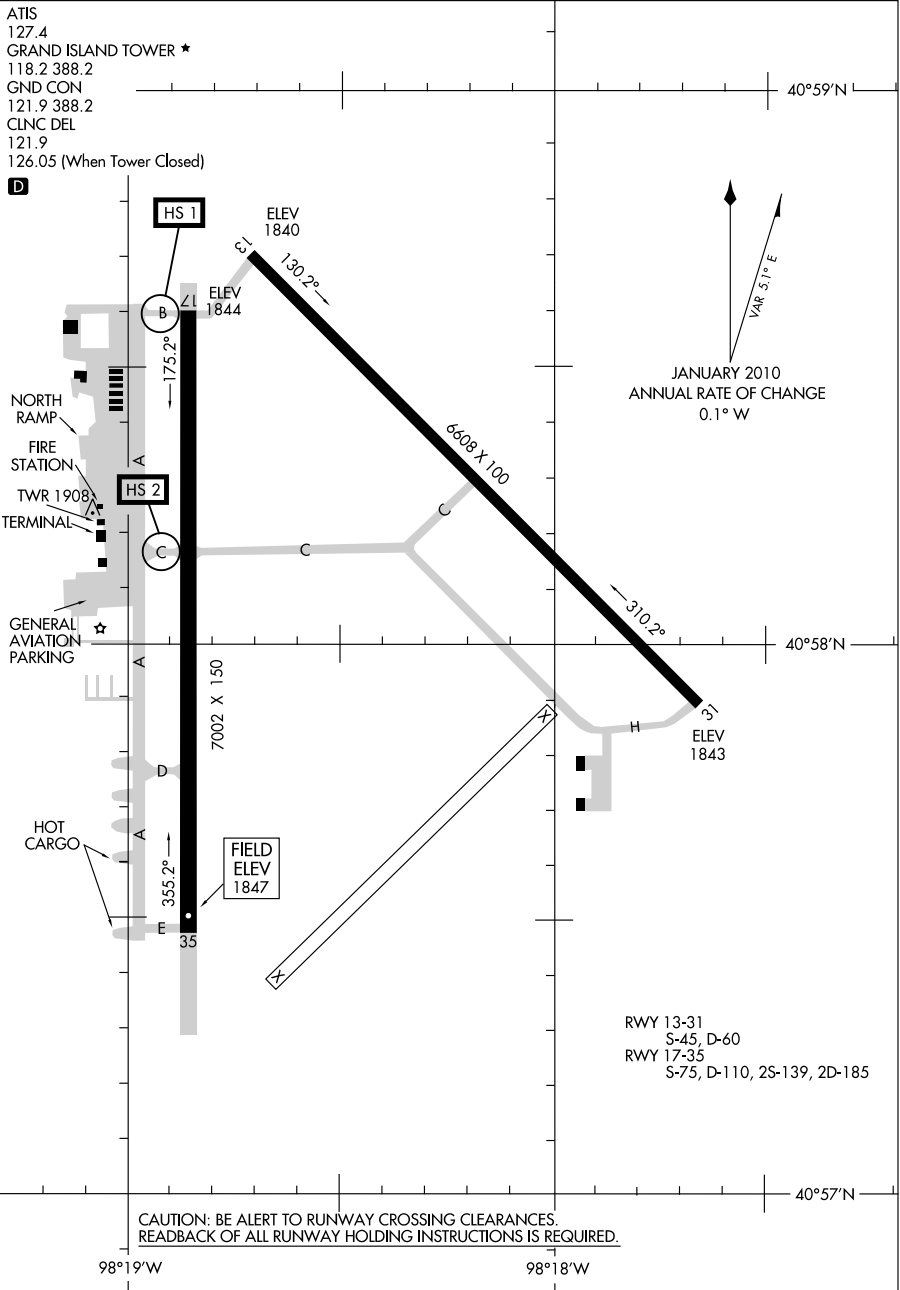
GRAND FORKS INTL (GFK)

NC. 23 SEP 2010 to 18 NOV 2010

10266

AIRPORT DIAGRAM

GRAND ISLAND/ CENTRAL NEBRASKA RGNL (GRI)
AL-173 (FAA) GRAND ISLAND, NEBRASKA



AIRPORT DIAGRAM

10266

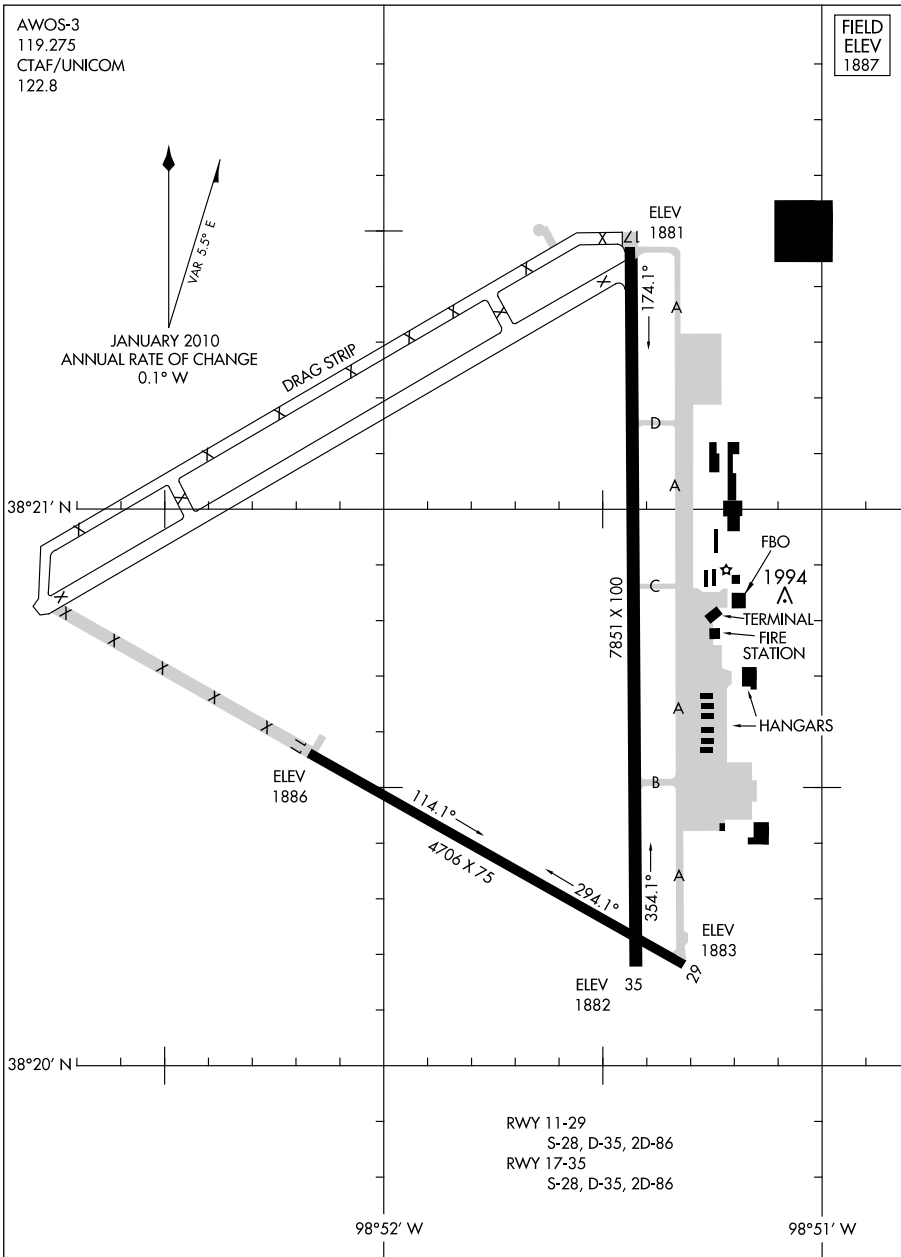
GRAND ISLAND, NEBRASKA
GRAND ISLAND/ CENTRAL NEBRASKA RGNL (GRI)

10210

AIRPORT DIAGRAM

AL-175 (FAA)

GREAT BEND MUNI (GBD)
GREAT BEND, KANSAS



AIRPORT DIAGRAM

10210

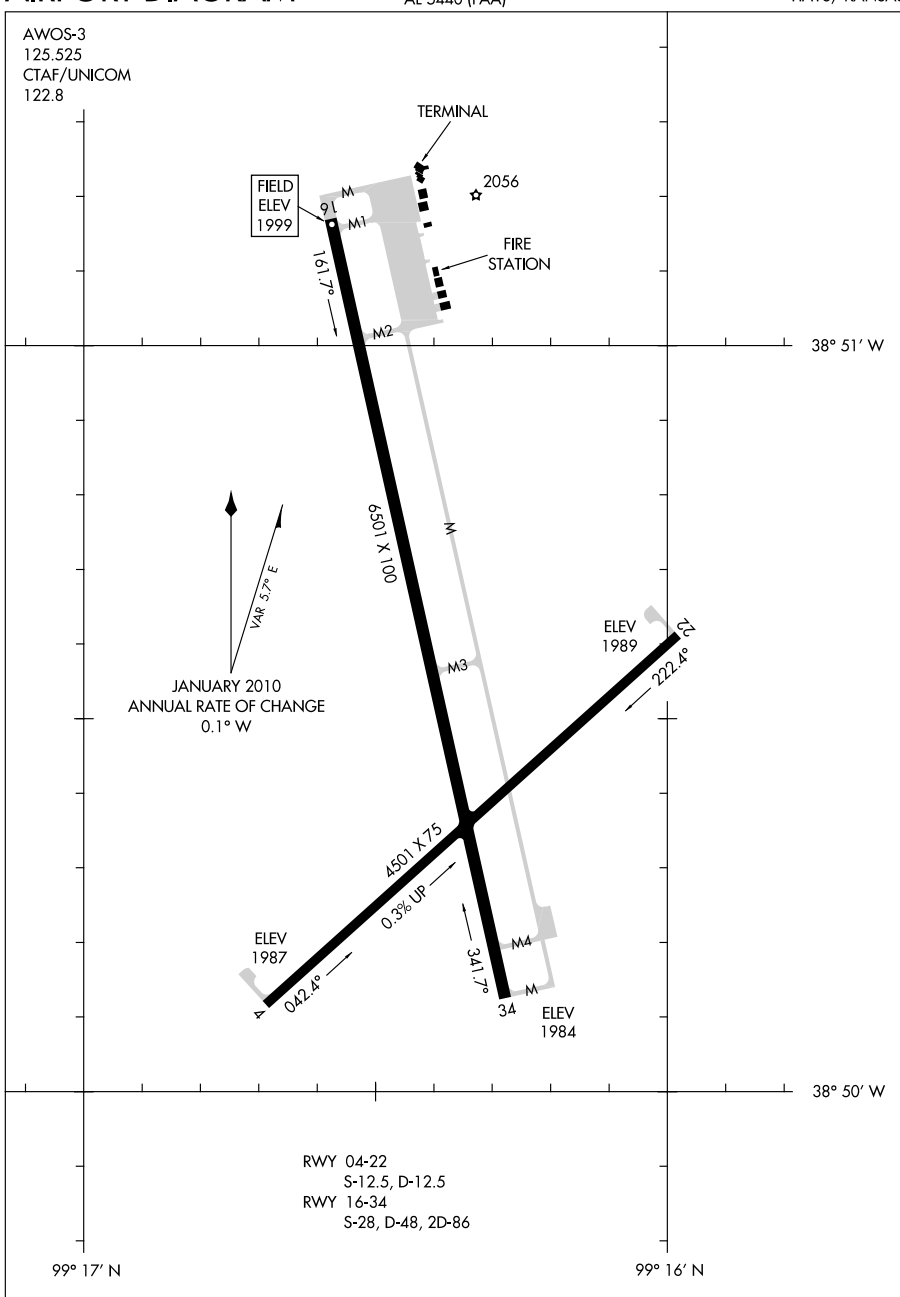
GREAT BEND, KANSAS
GREAT BEND MUNI (GBD)

10210

AIRPORT DIAGRAM

AL-5440 (FAA)

HAYS RGNL (HYS)
HAYS, KANSAS



AIRPORT DIAGRAM

10210

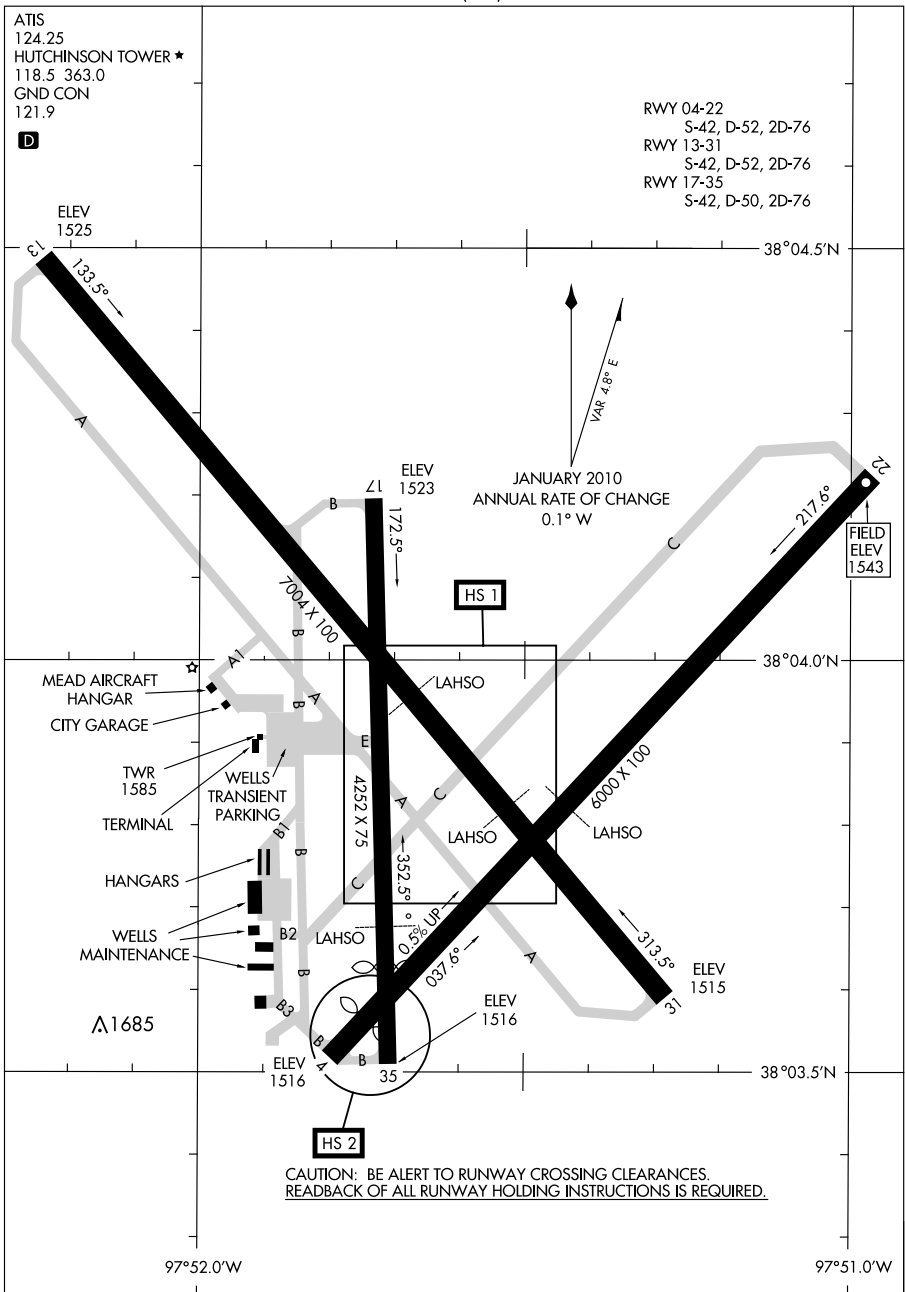
HAYS, KANSAS
HAYS RGNL (HYS)

10266

AIRPORT DIAGRAM

AL-200 (FAA)

HUTCHINSON MUNI (HUT)
HUTCHINSON, KANSAS



AIRPORT DIAGRAM

10266

HUTCHINSON, KANSAS
HUTCHINSON MUNI (HUT)

NC. 23 SEP 2010 to 18 NOV 2010

10266

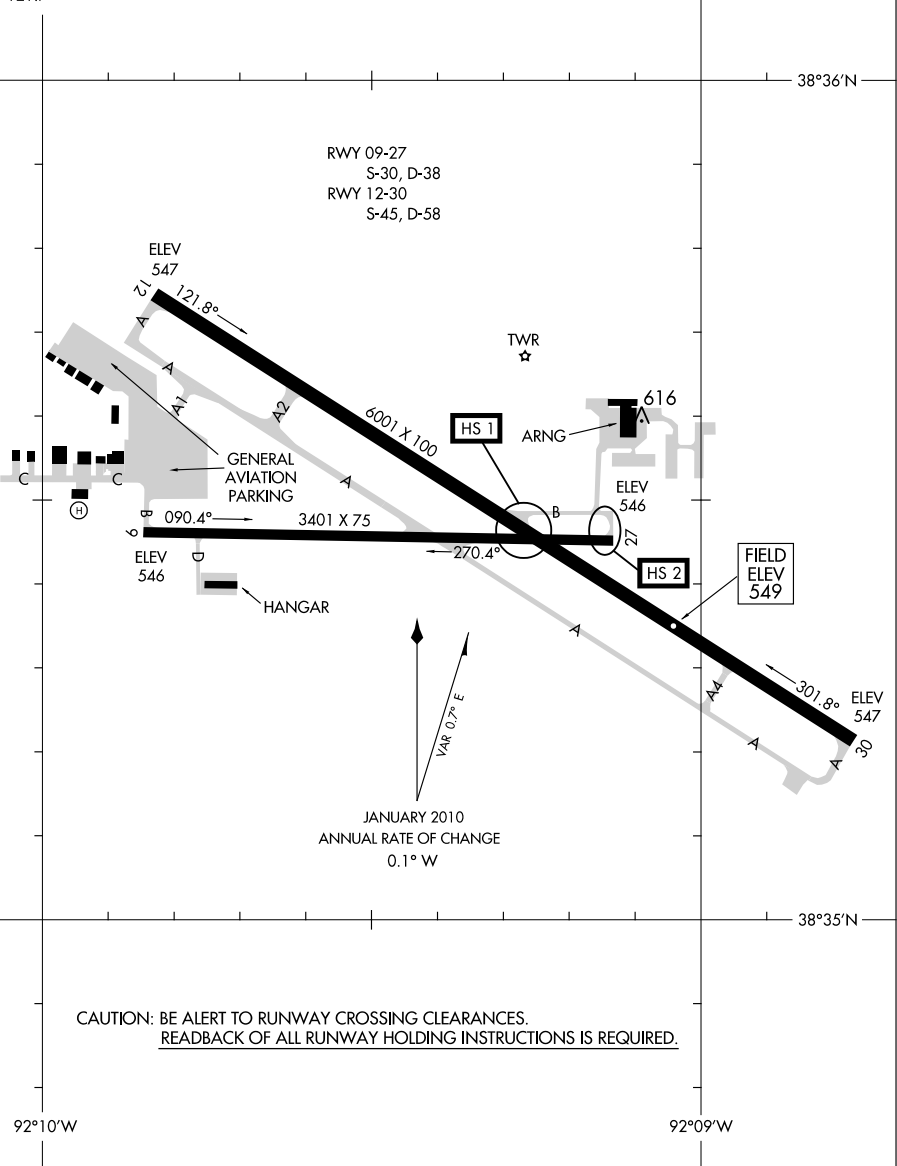
AIRPORT DIAGRAM

AL-796 (FAA)

JEFFERSON CITY MEMORIAL (JEF)

JEFFERSON CITY, MISSOURI

ASOS
133.625
JEFFERSON CITY TOWER★
125.6
GND CON
121.7



AIRPORT DIAGRAM

10266

JEFFERSON CITY, MISSOURI

JEFFERSON CITY MEMORIAL (JEF)

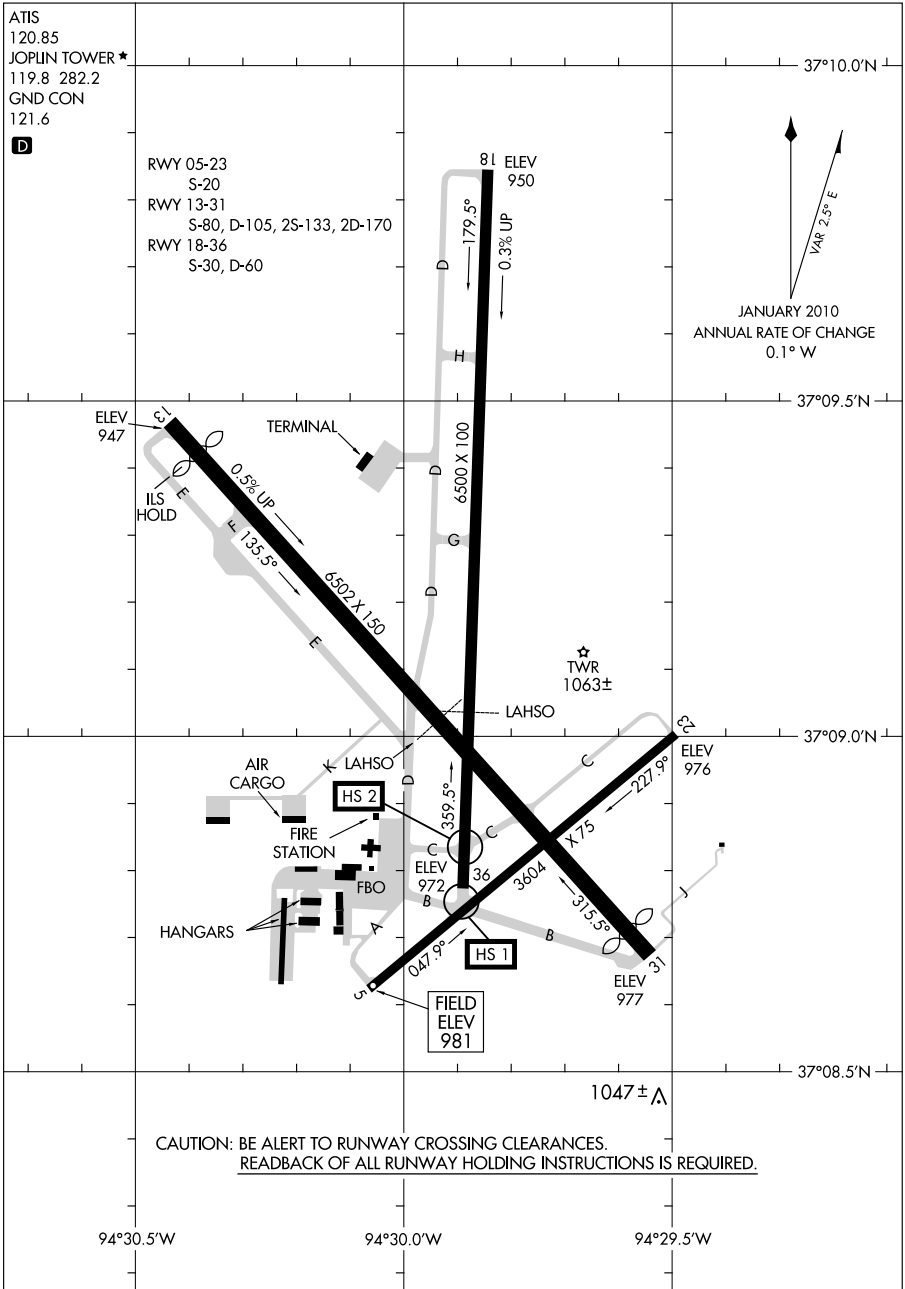
10266

AIRPORT DIAGRAM

AL-540 (FAA)

JOPLIN RGNL (JLN)

JOPLIN, MISSOURI



AIRPORT DIAGRAM

10266

JOPLIN, MISSOURI

JOPLIN RGNL (JLN)

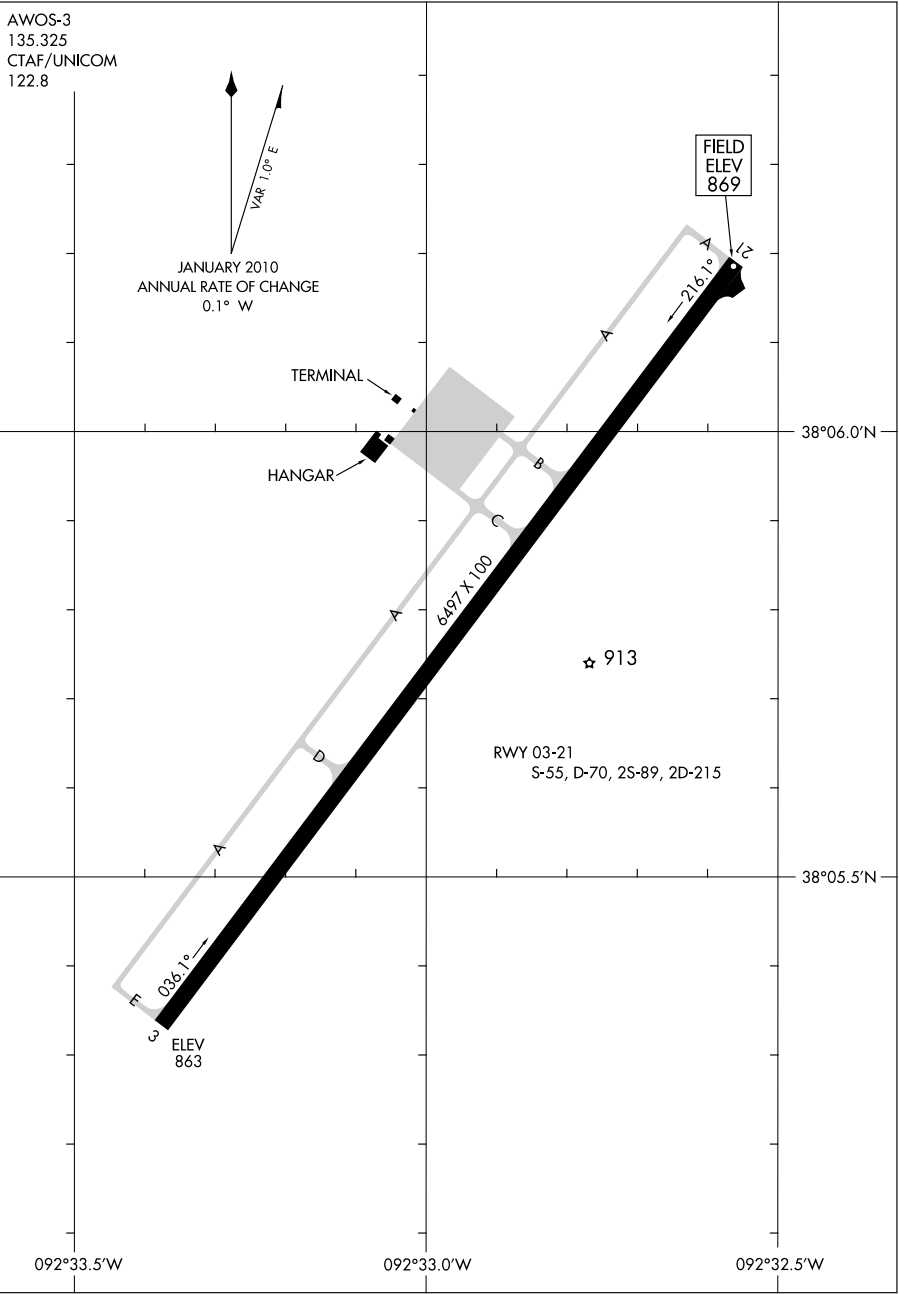
NC. 23 SEP 2010 to 18 NOV 2010

10210
AIRPORT DIAGRAM

AL-5765 (FAA)

KAISER/LEE C. FINE MEMORIAL (AIZ)
KAISER/LAKE OZARK, MISSOURI

AWOS-3
135.325
CTAF/UNICOM
122.8



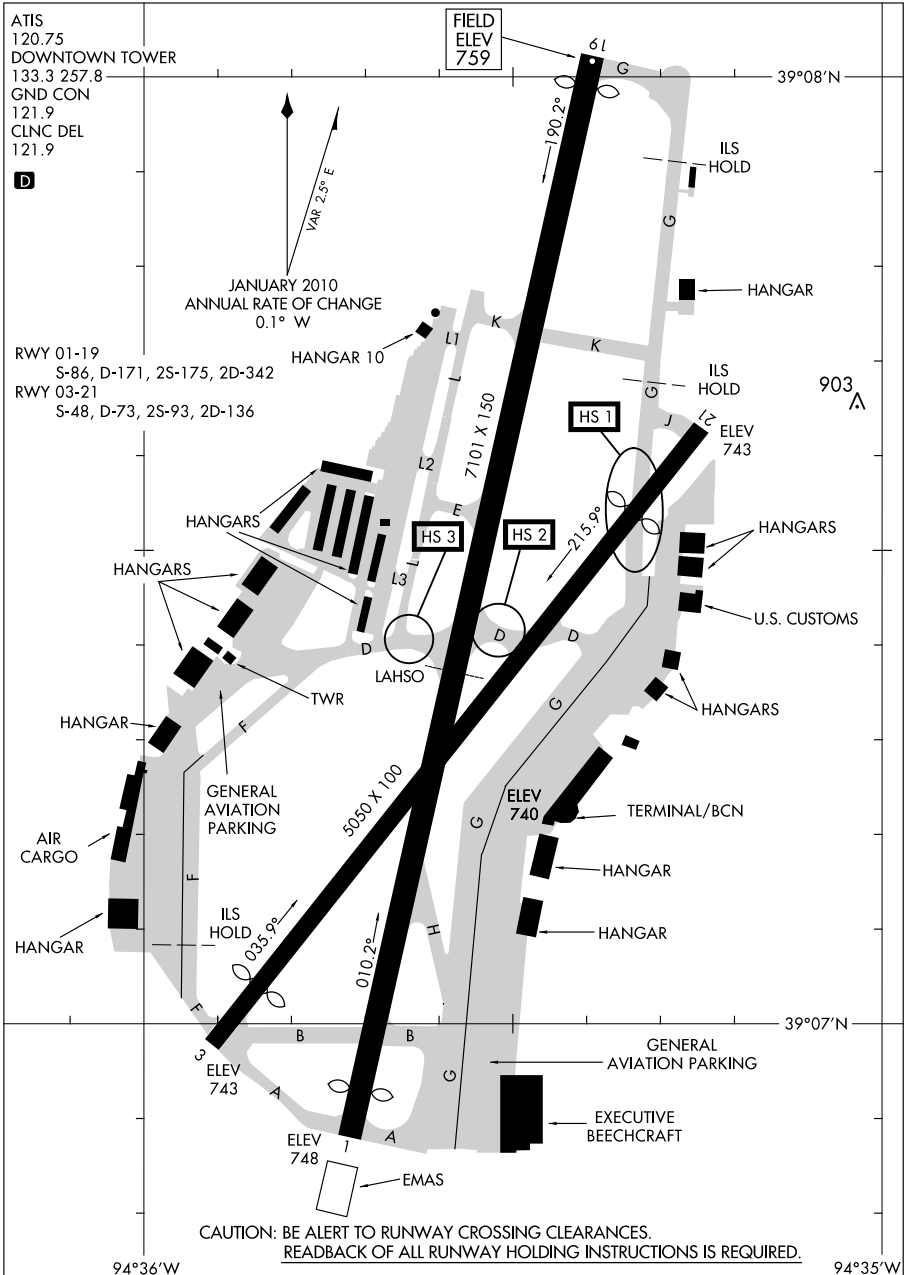
AIRPORT DIAGRAM
10210

KAISER/LAKE OZARK, MISSOURI
KAISER/LEE C. FINE MEMORIAL (AIZ)

10266

AIRPORT DIAGRAM

KANSAS CITY/CHARLES B. WHEELER DOWNTOWN (MCK)
AL-213 (FAA) KANSAS CITY, MISSOURI



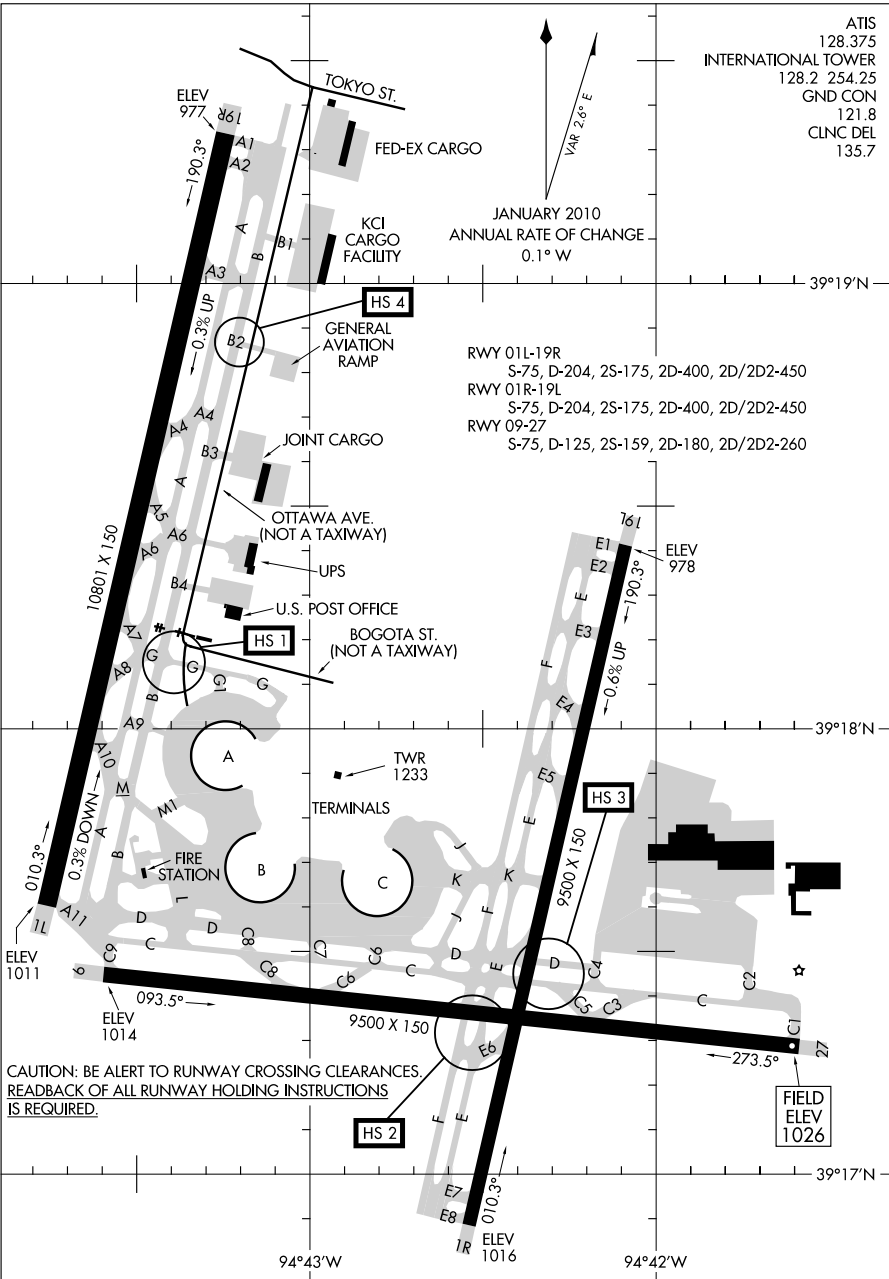
AIRPORT DIAGRAM

10266

KANSAS CITY, MISSOURI
KANSAS CITY/CHARLES B. WHEELER DOWNTOWN (MCK)

AIRPORT DIAGRAM

KANSAS CITY INTL (MCI)
KANSAS CITY, MISSOURI



AL-780 (FAA)

ATIS
128.375
INTERNATIONAL TOWER
128.2 254.25
GND CON
121.8
CLNC DEL
135.7

JANUARY 2010
ANNUAL RATE OF CHANGE
0.1° W

VAR 2.6° E

RWY 01L-19R
S-75, D-204, 2S-175, 2D-400, 2D/2D2-450
RWY 01R-19L
S-75, D-204, 2S-175, 2D-400, 2D/2D2-450
RWY 09-27
S-75, D-125, 2S-159, 2D-180, 2D/2D2-260

AIRPORT DIAGRAM

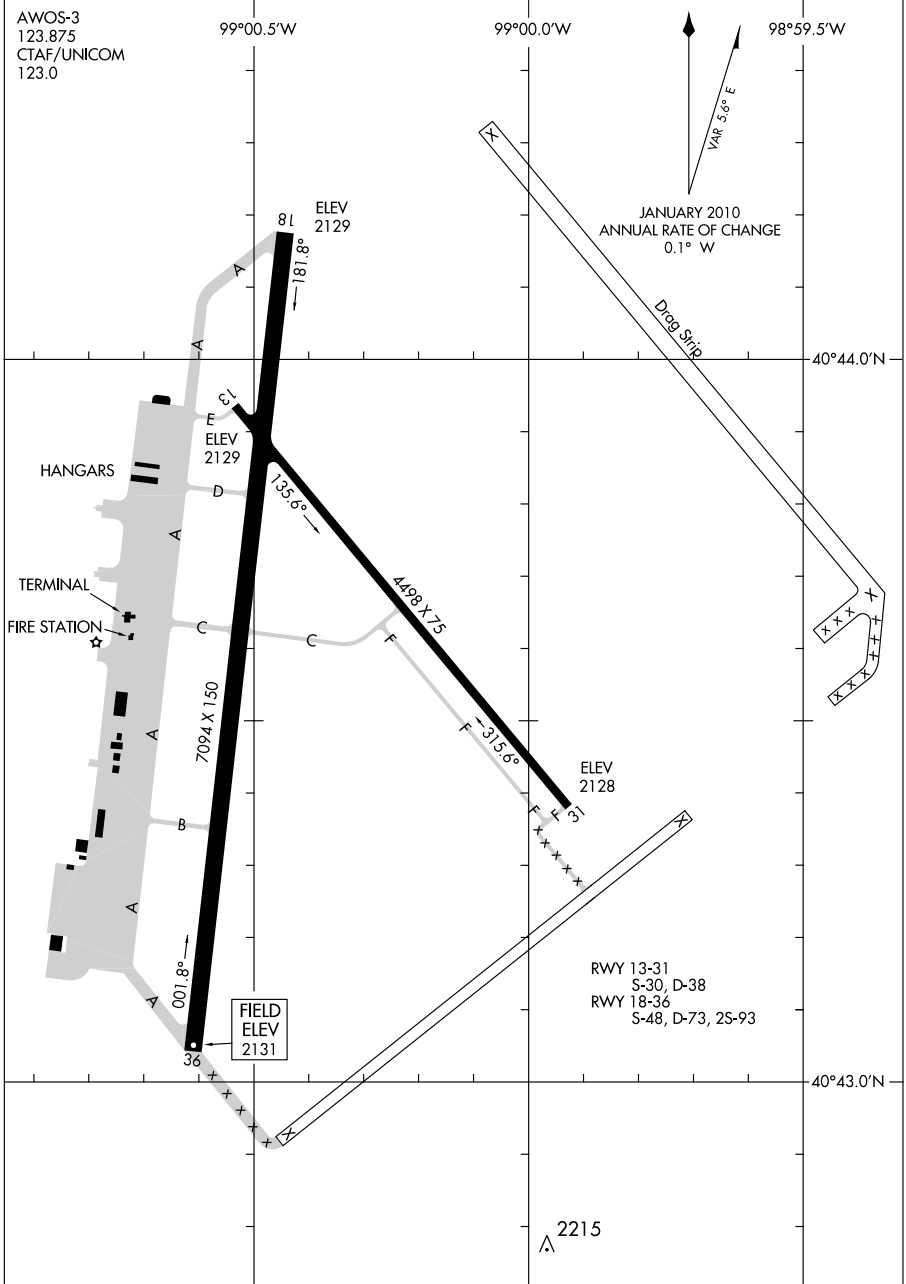
KANSAS CITY, MISSOURI
KANSAS CITY INTL (MCI)

10210

AIRPORT DIAGRAM

AL-541 (FAA)

KEARNEY RGNL (EAR)
KEARNEY, NEBRASKA



AIRPORT DIAGRAM

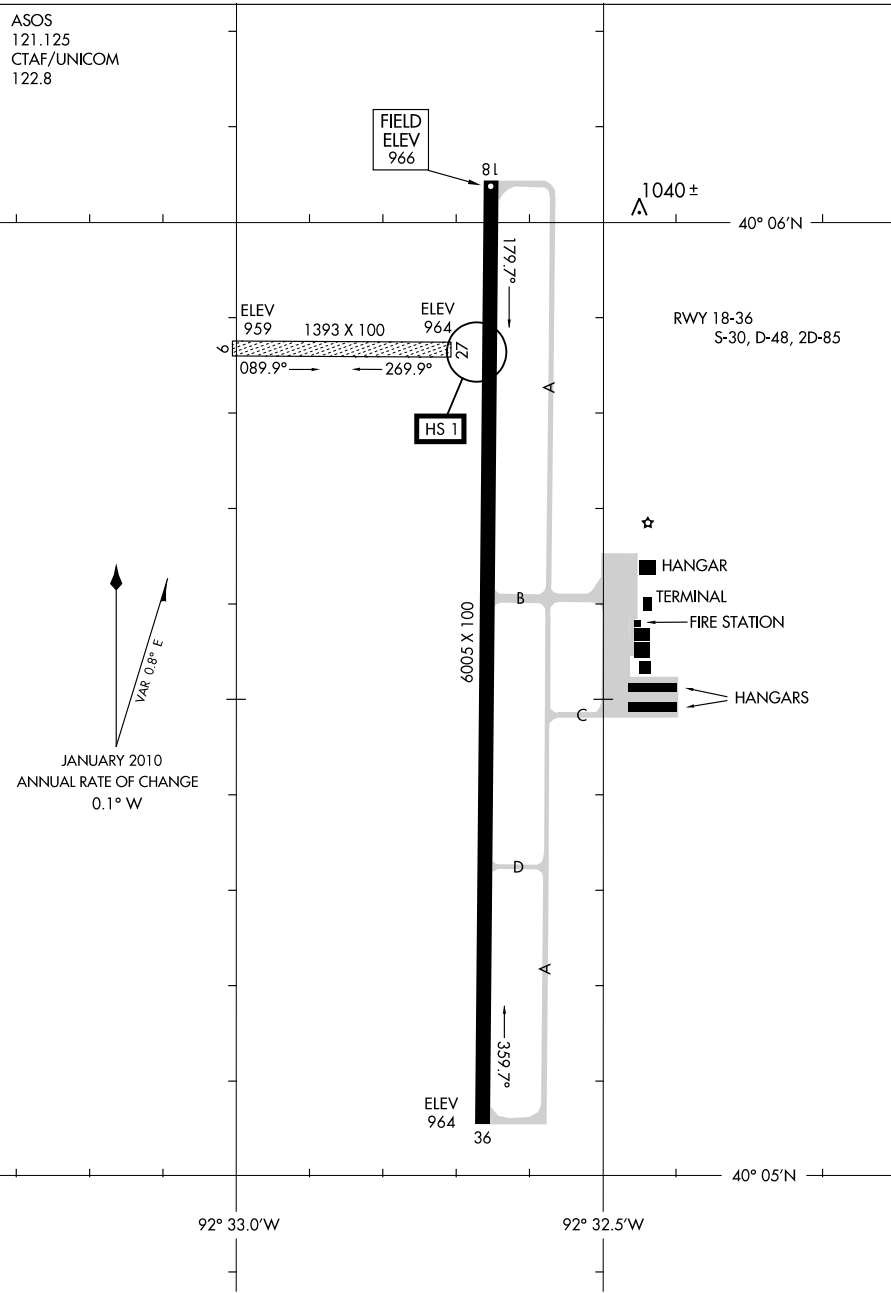
10210

KEARNEY, NEBRASKA
KEARNEY RGNL (EAR)

NC. 23 SEP 2010 to 18 NOV 2010

10266

AIRPORT DIAGRAM



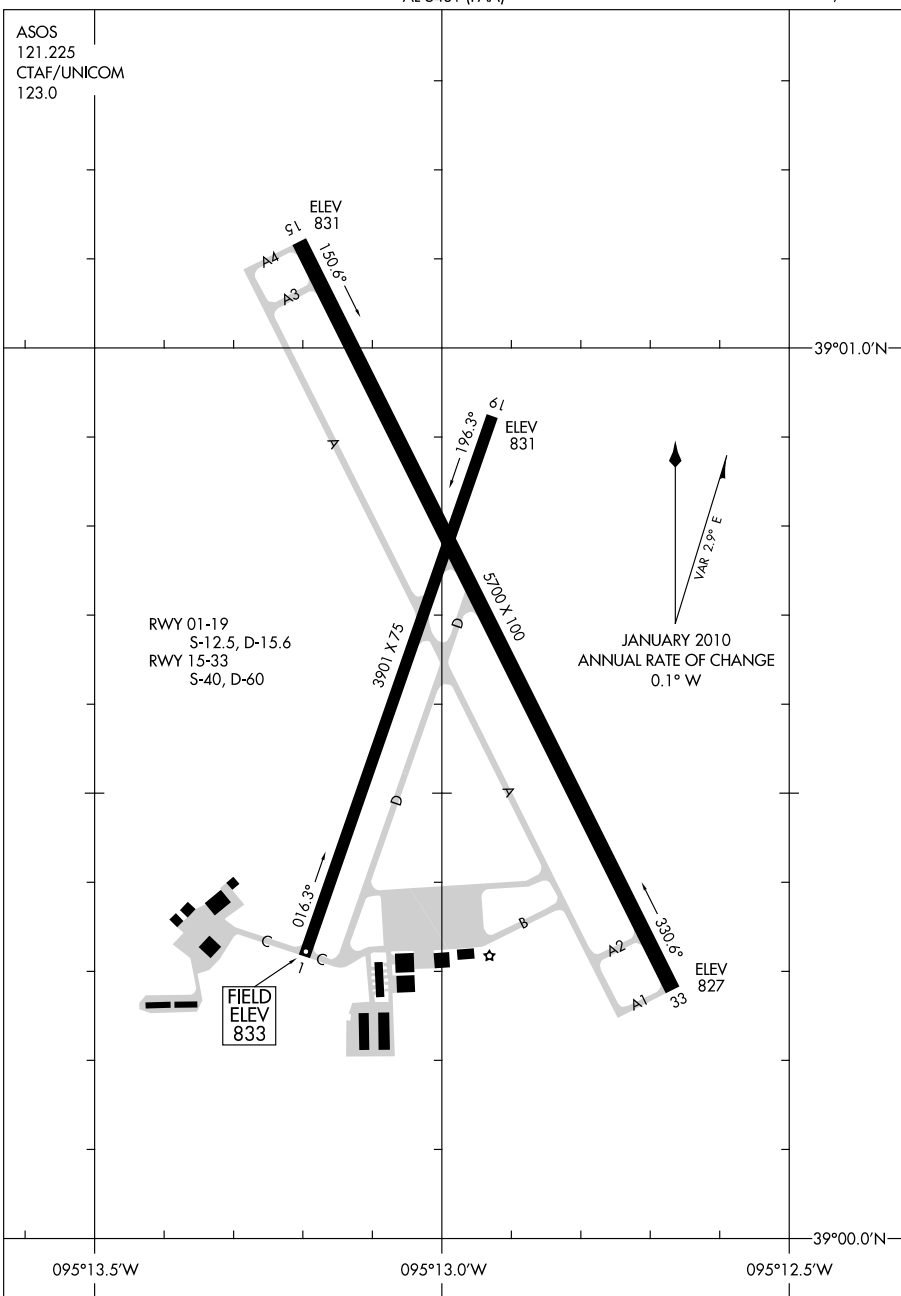
10210

AIRPORT DIAGRAM

AL-5481 (FAA)

LAWRENCE MUNI (LWC)
LAWRENCE, KANSAS

ASOS
121.225
CTAF/UNICOM
123.0



AIRPORT DIAGRAM

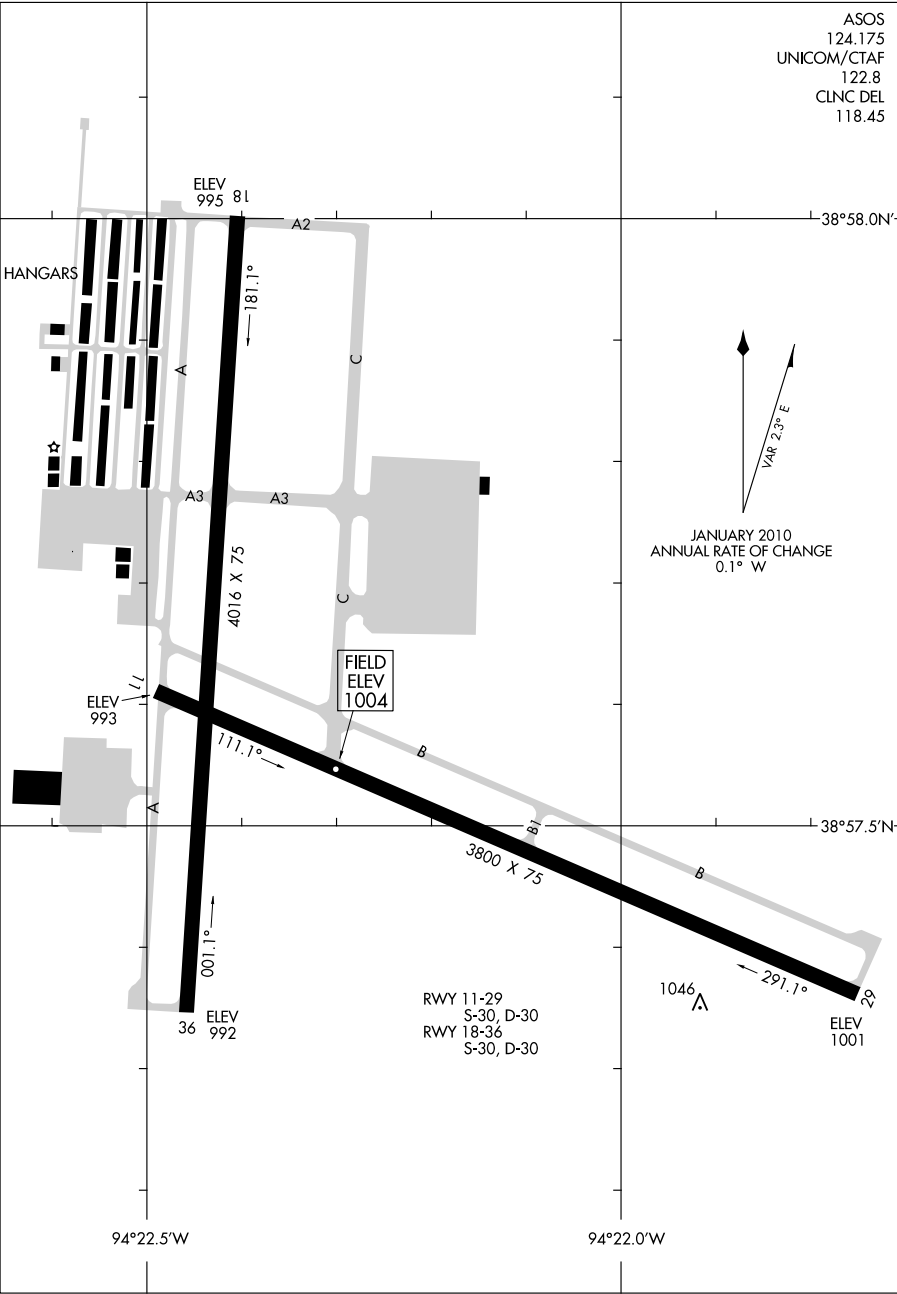
10210

LAWRENCE, KANSAS
LAWRENCE MUNI (LWC)

10210
AIRPORT DIAGRAM

AL-6104 (FAA)

LEE'S SUMMIT MUNI (LXT)
LEE'S SUMMIT, MISSOURI



AIRPORT DIAGRAM
10210

LEE'S SUMMIT, MISSOURI
LEE'S SUMMIT MUNI (LXT)

10266

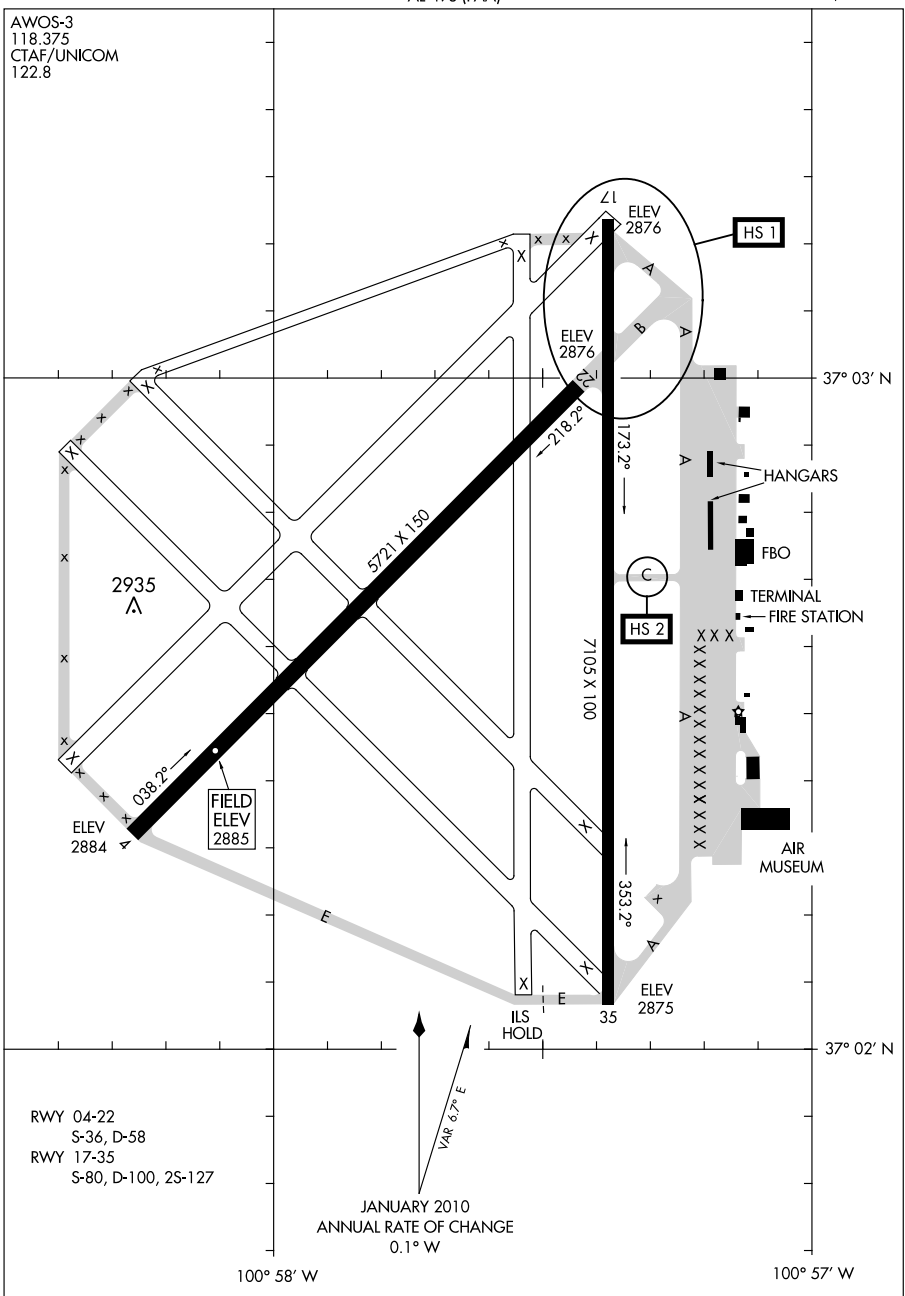
AIRPORT DIAGRAM

AL-498 (FAA)

LIBERAL MID-AMERICA RGNL (LBL)

LIBERAL, KANSAS

AWOS-3
118.375
CTAF/UNICOM
122.8



AIRPORT DIAGRAM

10266

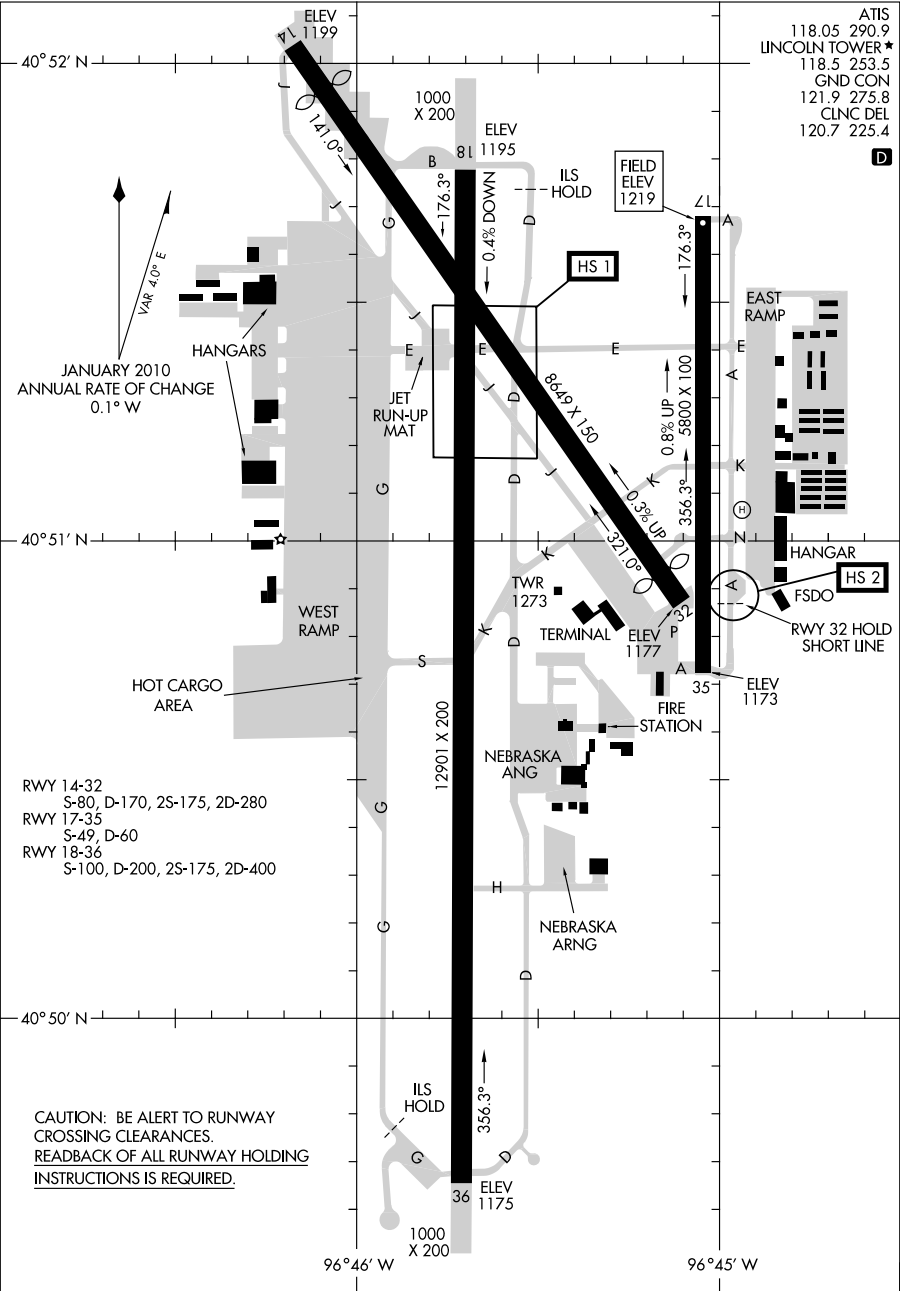
LIBERAL, KANSAS

LIBERAL MID-AMERICA RGNL (LBL)

10266
AIRPORT DIAGRAM

AL-232 (FAA)

LINCOLN (LNK)
LINCOLN, NEBRASKA



AIRPORT DIAGRAM
10266

LINCOLN, NEBRASKA
LINCOLN (LNK)

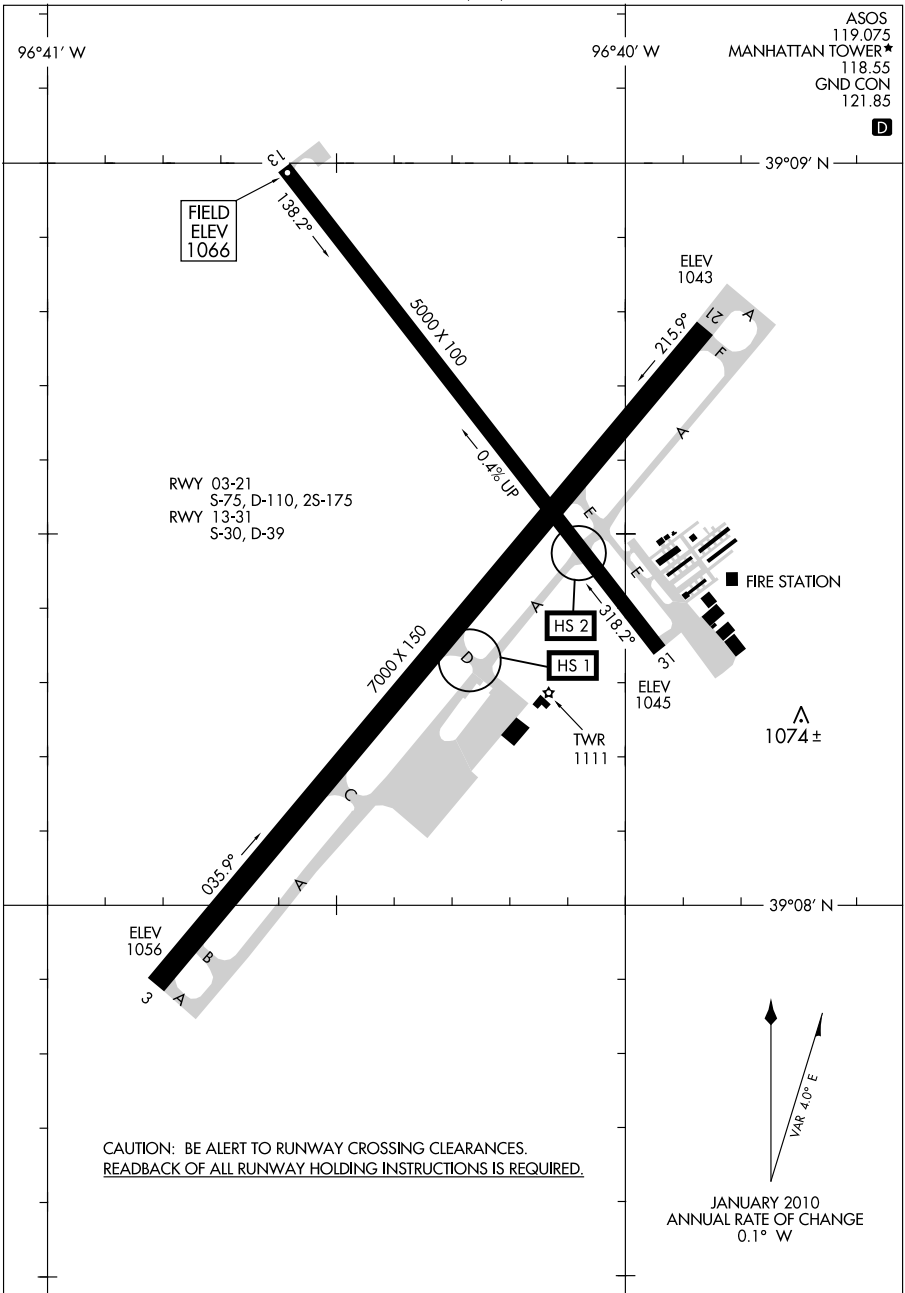
10266

AIRPORT DIAGRAM

AL-5241 (FAA)

MANHATTAN RGNL (MHK)

MANHATTAN, KANSAS



AIRPORT DIAGRAM

10266

MANHATTAN, KANSAS

MANHATTAN RGNL (MHK)

10210

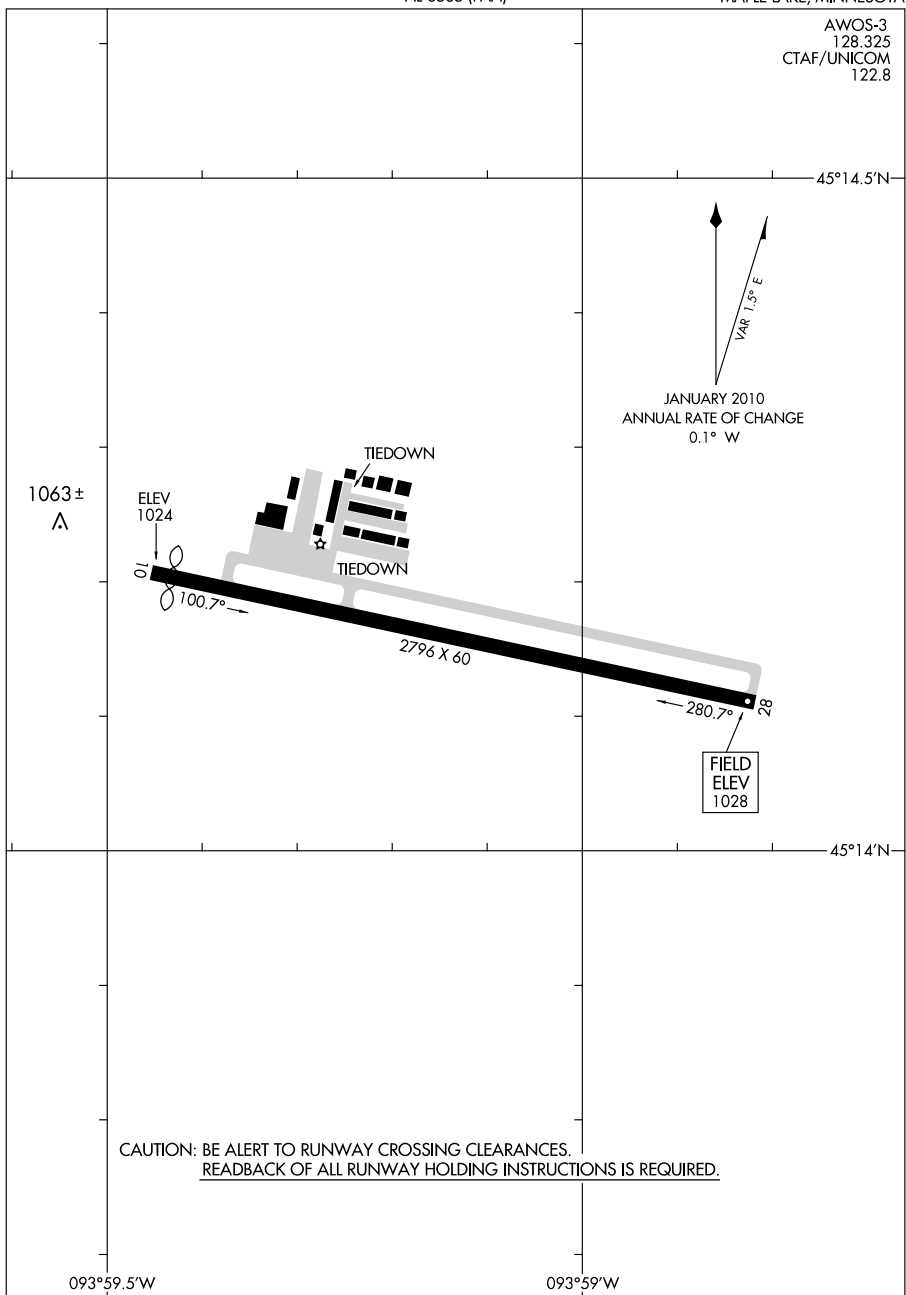
AIRPORT DIAGRAM

AL-6585 (FAA)

MAPLE LAKE MUNI (MGG)

MAPLE LAKE, MINNESOTA

AWOS-3
128.325
CTAF/UNICOM
122.8



AIRPORT DIAGRAM

10210

MAPLE LAKE, MINNESOTA

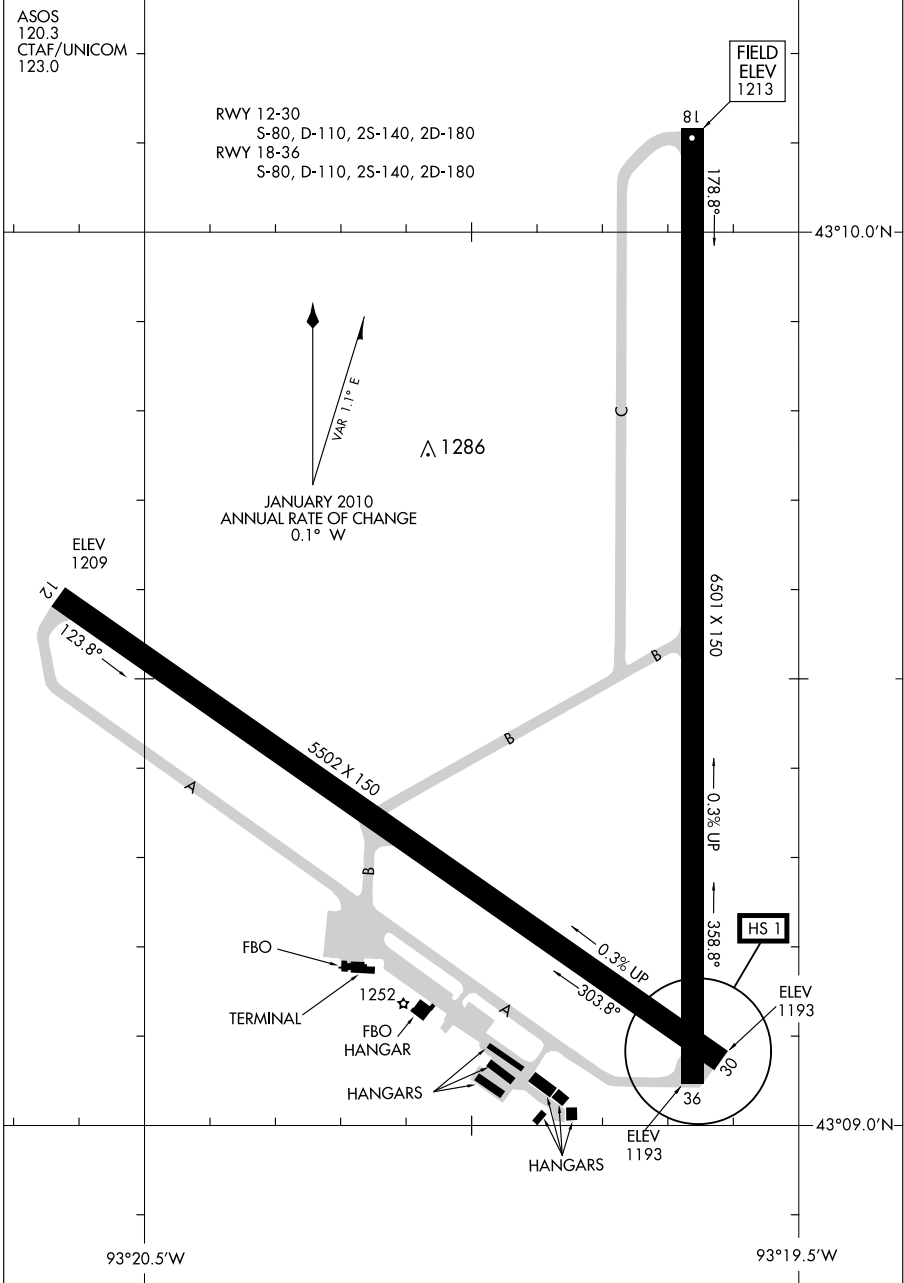
MAPLE LAKE MUNI (MGG)

10266

AIRPORT DIAGRAM

AL-667 (FAA)

MASON CITY MUNI (MCW)
MASON CITY, IOWA



AIRPORT DIAGRAM

10266

MASON CITY, IOWA
MASON CITY MUNI (MCW)

NC. 23 SEP 2010 to 18 NOV 2010

10210

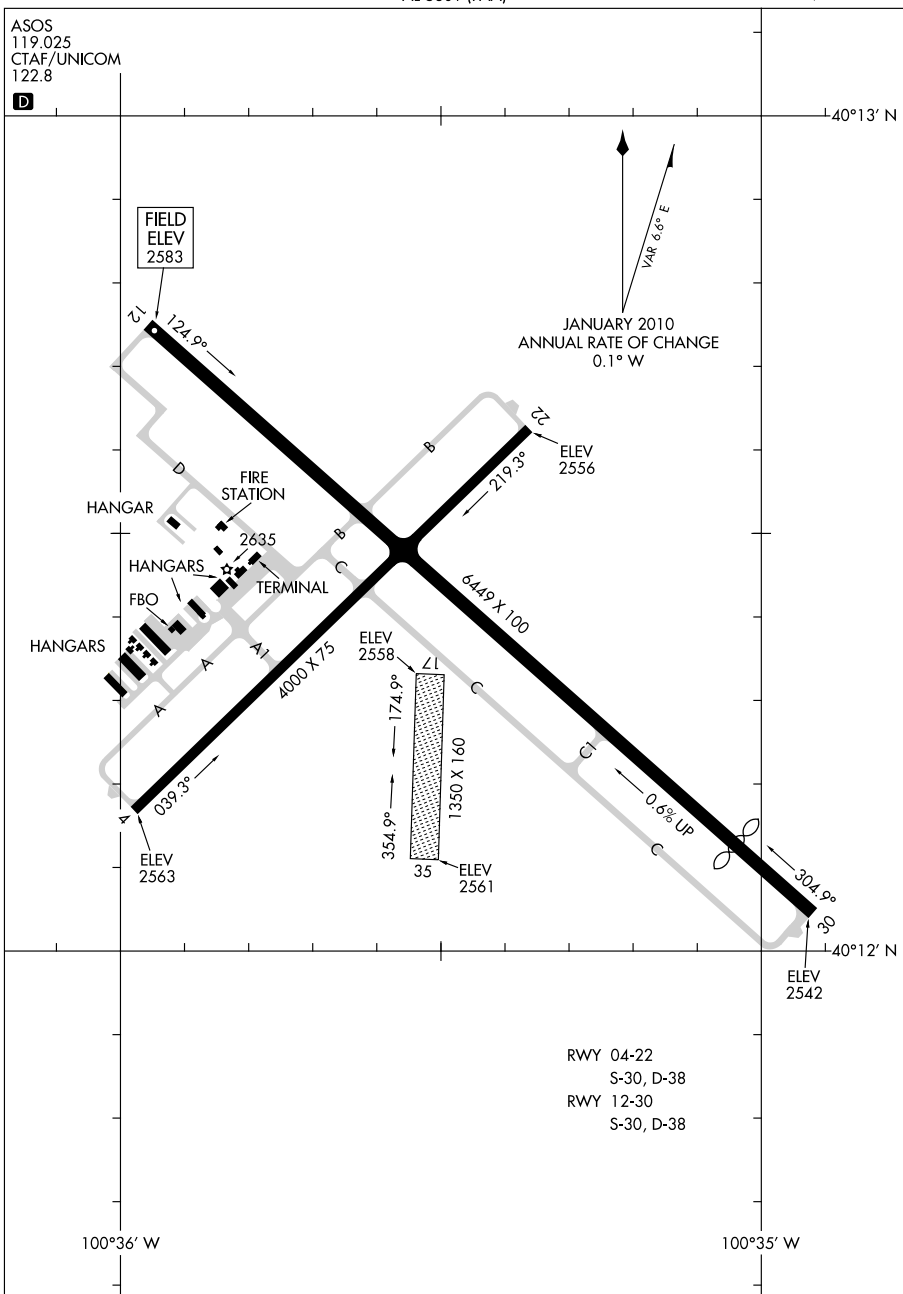
AIRPORT DIAGRAM

AL-5301 (FAA)

MC COOK BEN NELSON RGNL (MCK)
MC COOK, NEBRASKA

ASOS
119.025
CTAF/UNICOM
122.8

D



AIRPORT DIAGRAM

10210

MC COOK, NEBRASKA
MC COOK BEN NELSON RGNL (MCK)

NC. 23 SEP 2010 to 18 NOV 2010

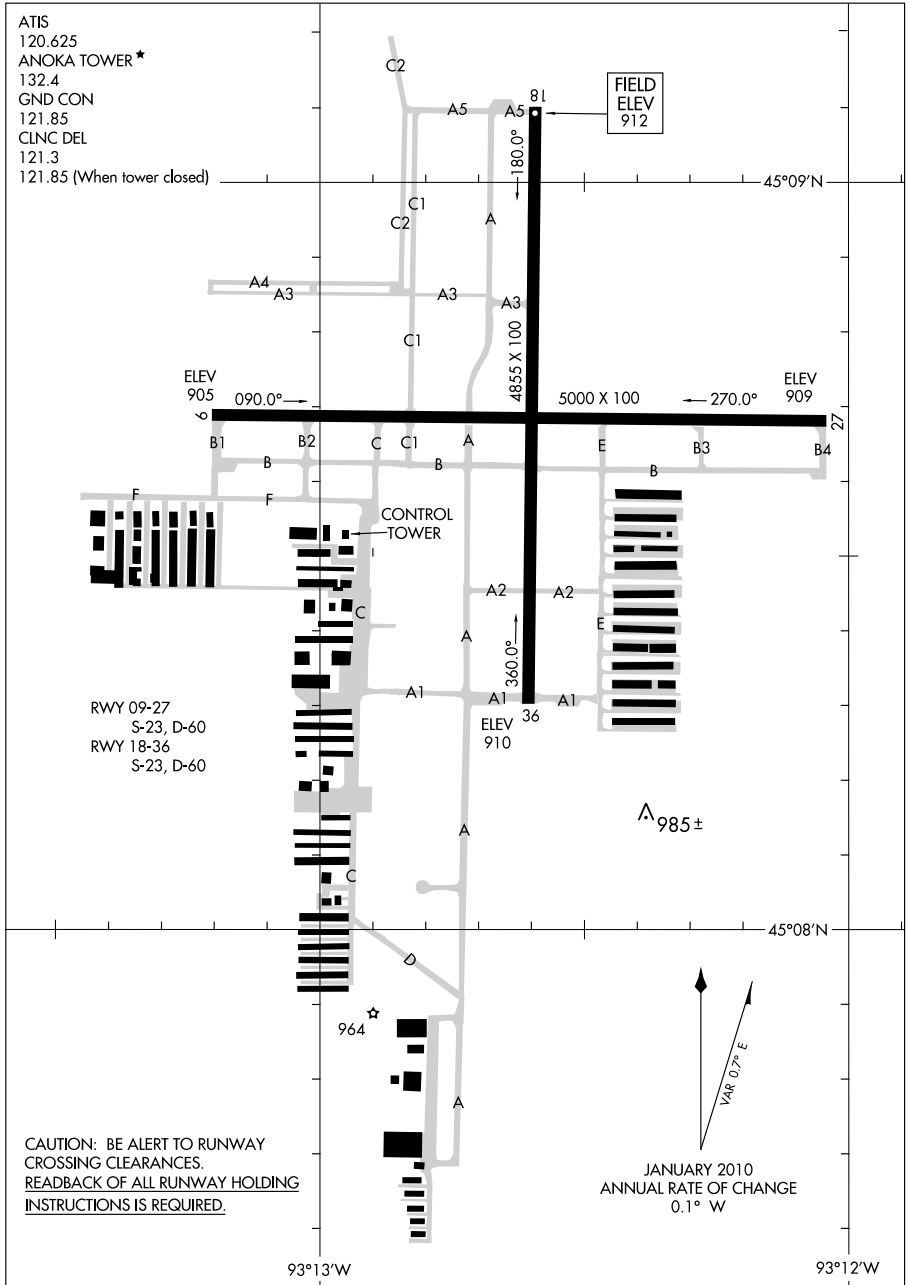
10210

MINNEAPOLIS/ANOKA COUNTY- BLAINE AIRPORT (JANES FIELD) (ANE)

AIRPORT DIAGRAM

AL-5202 (FAA)

MINNEAPOLIS, MINNESOTA



AIRPORT DIAGRAM

MINNEAPOLIS, MINNESOTA

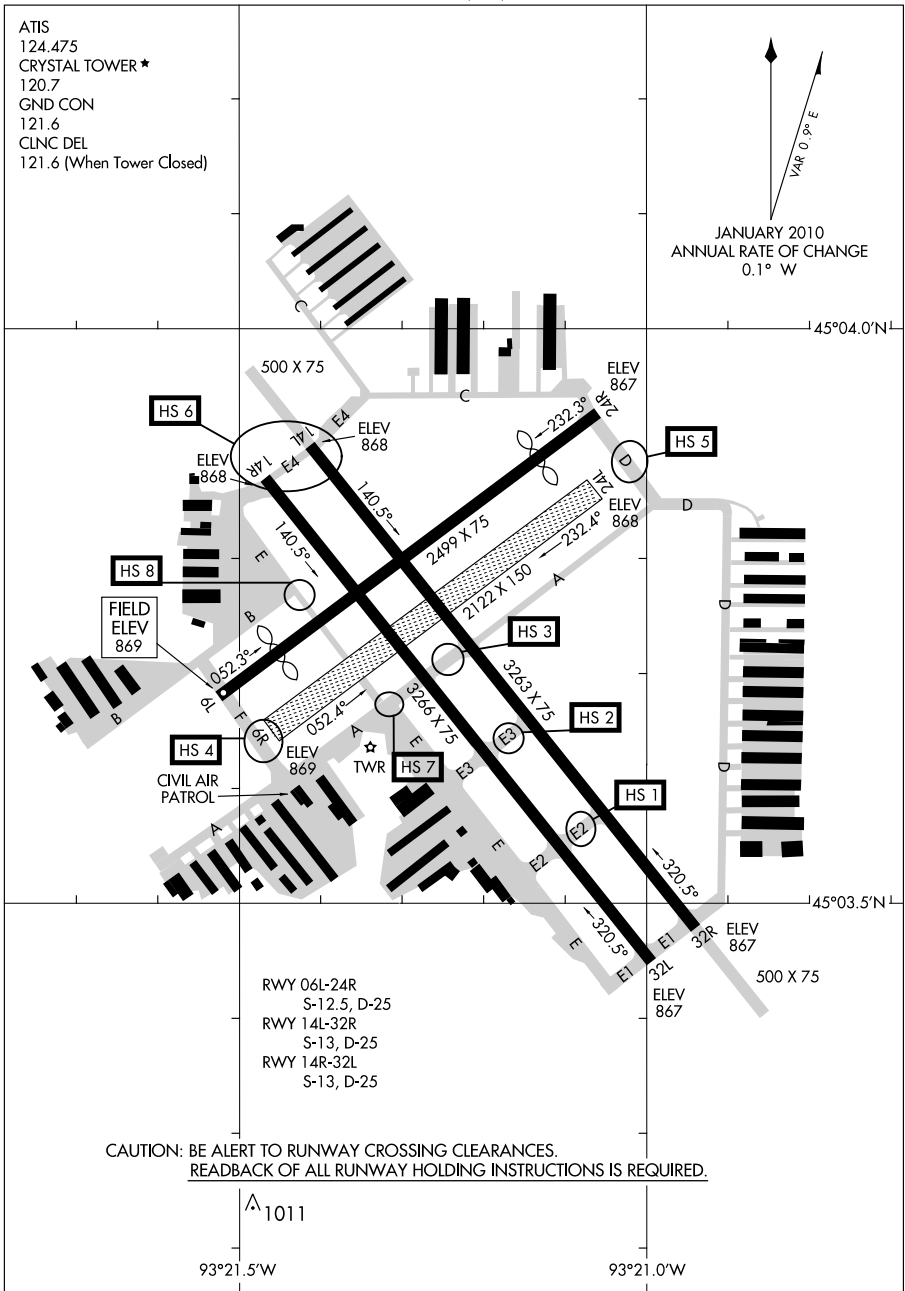
10210

MINNEAPOLIS/ANOKA COUNTY- BLAINE AIRPORT (JANES FIELD) (ANE)

AIRPORT DIAGRAM

AL-5158 (FAA)

MINNEAPOLIS/CRYSTAL (MIC)
MINNEAPOLIS, MINNESOTA



AIRPORT DIAGRAM

MINNEAPOLIS, MINNESOTA
MINNEAPOLIS/CRYSTAL (MIC)

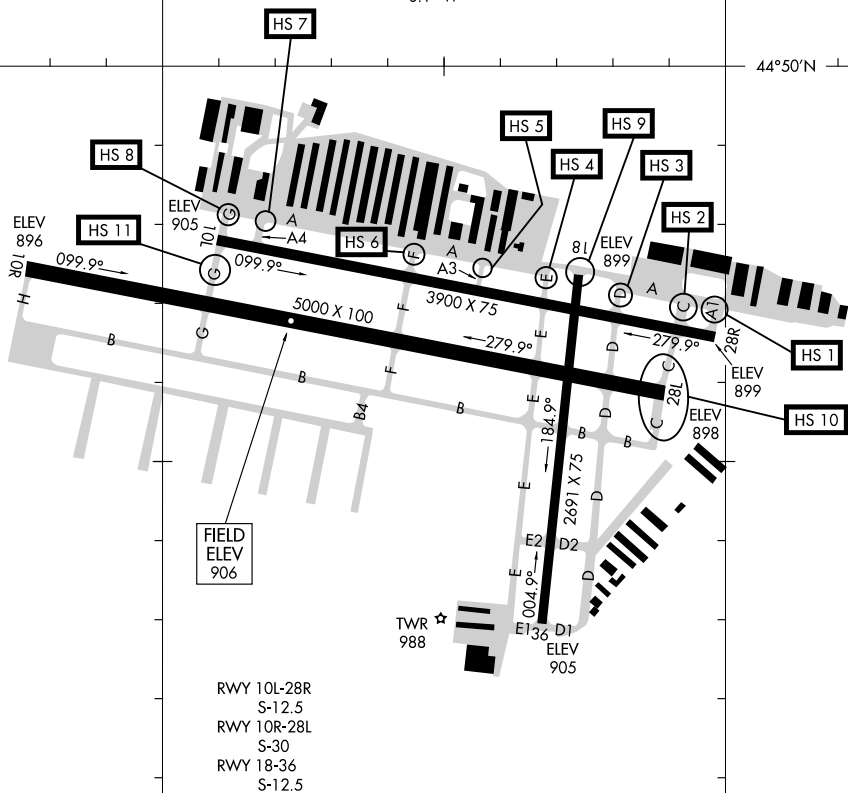
AIRPORT DIAGRAM

AL-5094 (FAA)

MINNEAPOLIS/ FLYING CLOUD (FCM)
MINNEAPOLIS, MINNESOTA

| | |
|----------------------|---------------------------|
| ATIS | 124.9 |
| FLYING CLOUD TOWER ★ | 119.15 |
| GND CON | 121.7 |
| CLNC DEL | 121.7 (When Tower Closed) |

JANUARY 2010
ANNUAL RATE OF CHANGE
0.1° W



CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

93°28'W

93°27'W

AIRPORT DIAGRAM

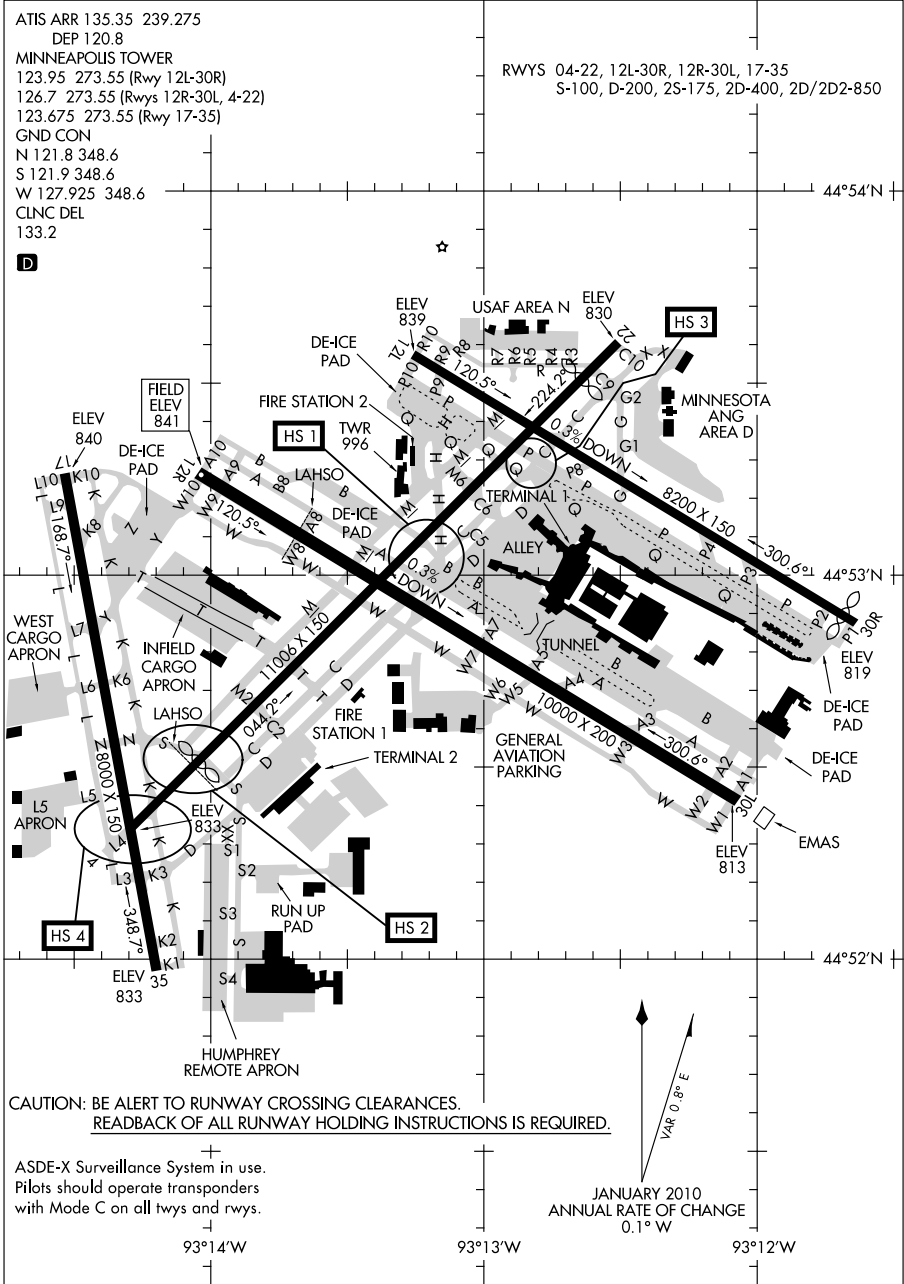
MINNEAPOLIS, MINNESOTA
MINNEAPOLIS/ FLYING CLOUD (FCM)

10266

AIRPORT DIAGRAM

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)
AL-264 (FAA)

MINNEAPOLIS, MINNESOTA



AIRPORT DIAGRAM

MINNEAPOLIS, MINNESOTA
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

10266

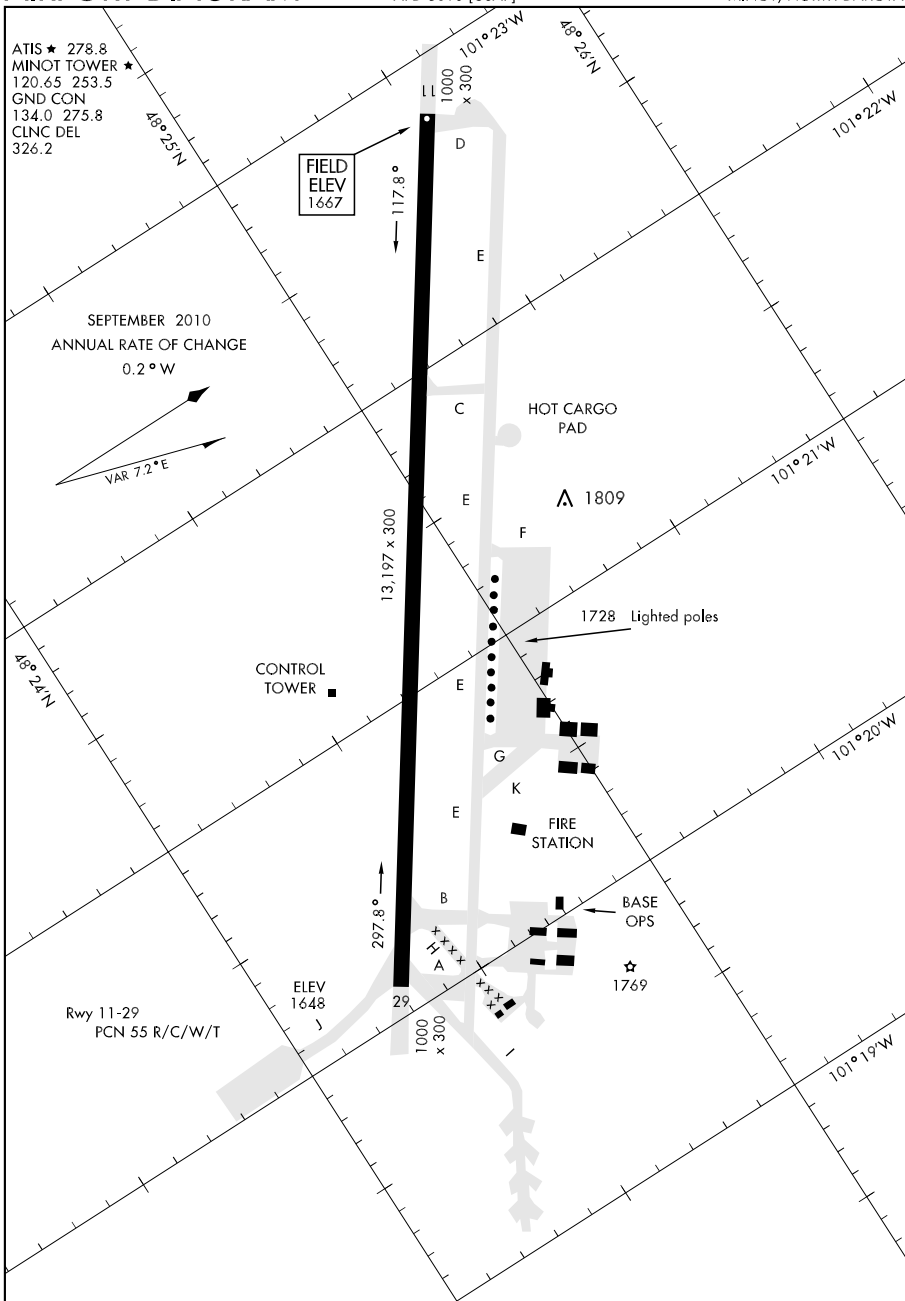
NC. 23 SEP 2010 to 18 NOV 2010

10266

AIRPORT DIAGRAM

MINOT AFB (KMIB)

MINOT, NORTH DAKOTA



AIRPORT DIAGRAM

MINOT, NORTH DAKOTA

MINOT AFB (KMIB)

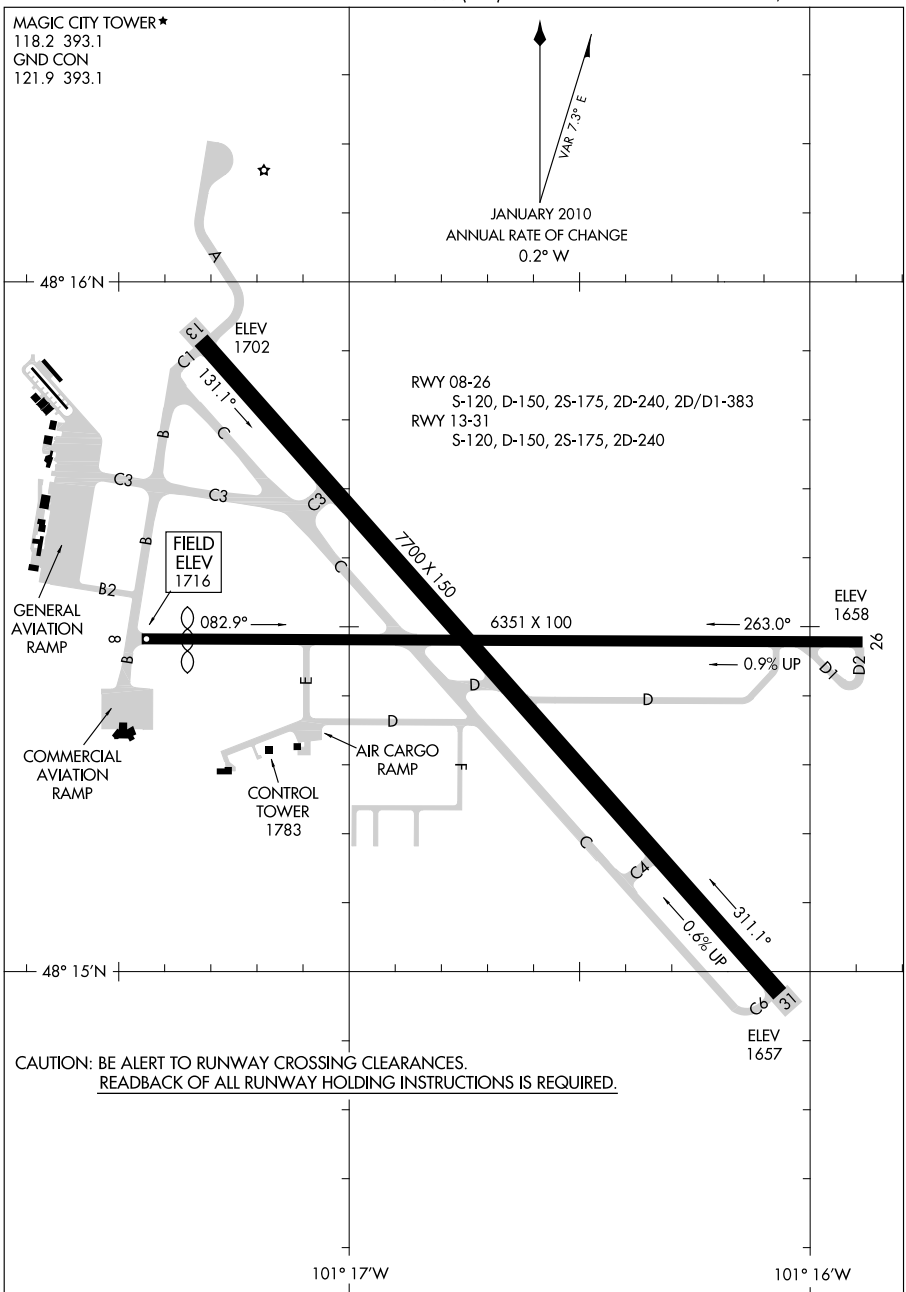
10210

AIRPORT DIAGRAM

AL-635 (FAA)

MINOT INTL (MOT)
MINOT, NORTH DAKOTA

MAGIC CITY TOWER ★
118.2 393.1
GND CON
121.9 393.1



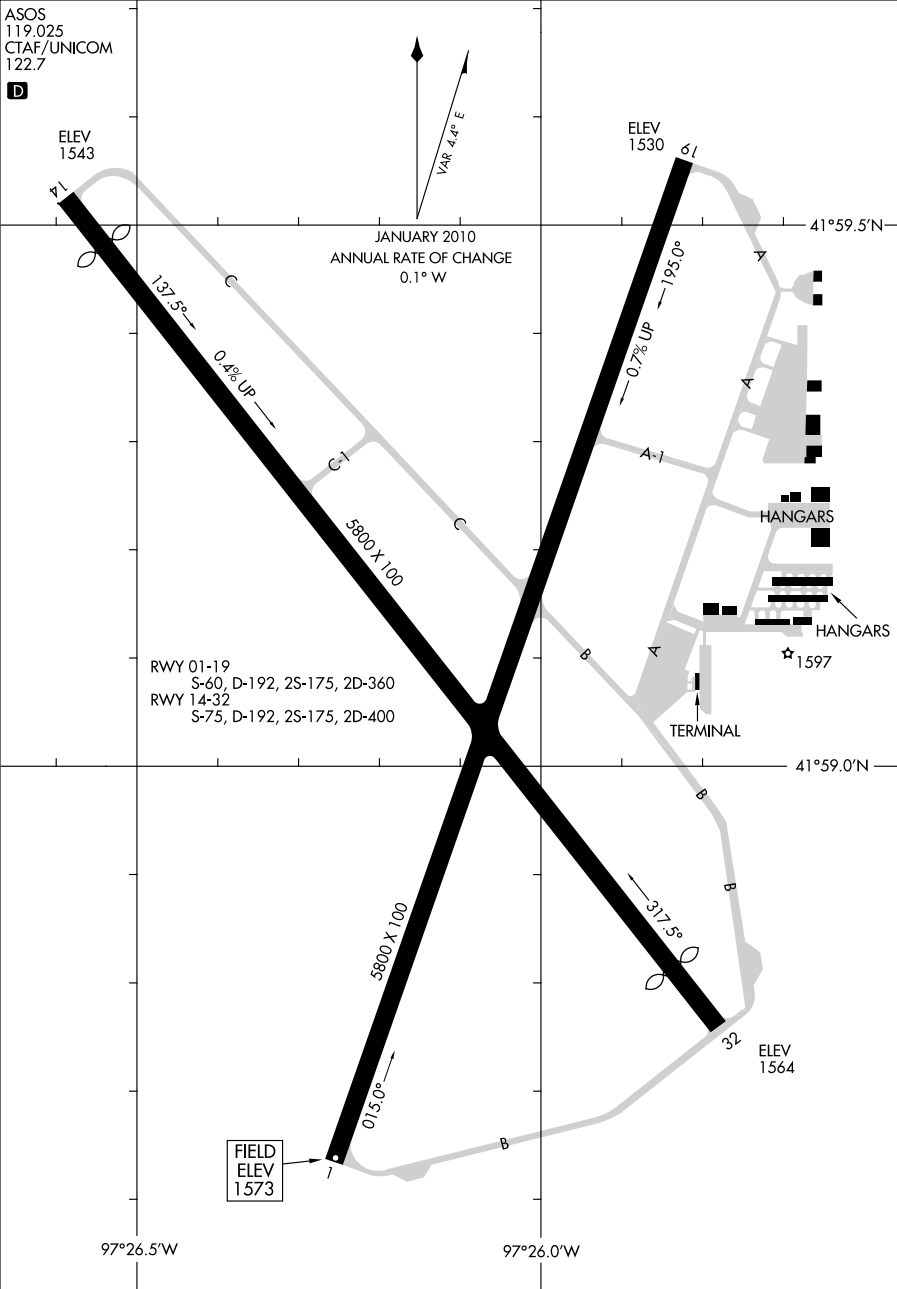
AIRPORT DIAGRAM

10210

MINOT, NORTH DAKOTA
MINOT INTL (MOT)

10210
AIRPORT DIAGRAM

NORFOLK/KARL STEFAN MEMORIAL (OFK)
NORFOLK, NEBRASKA



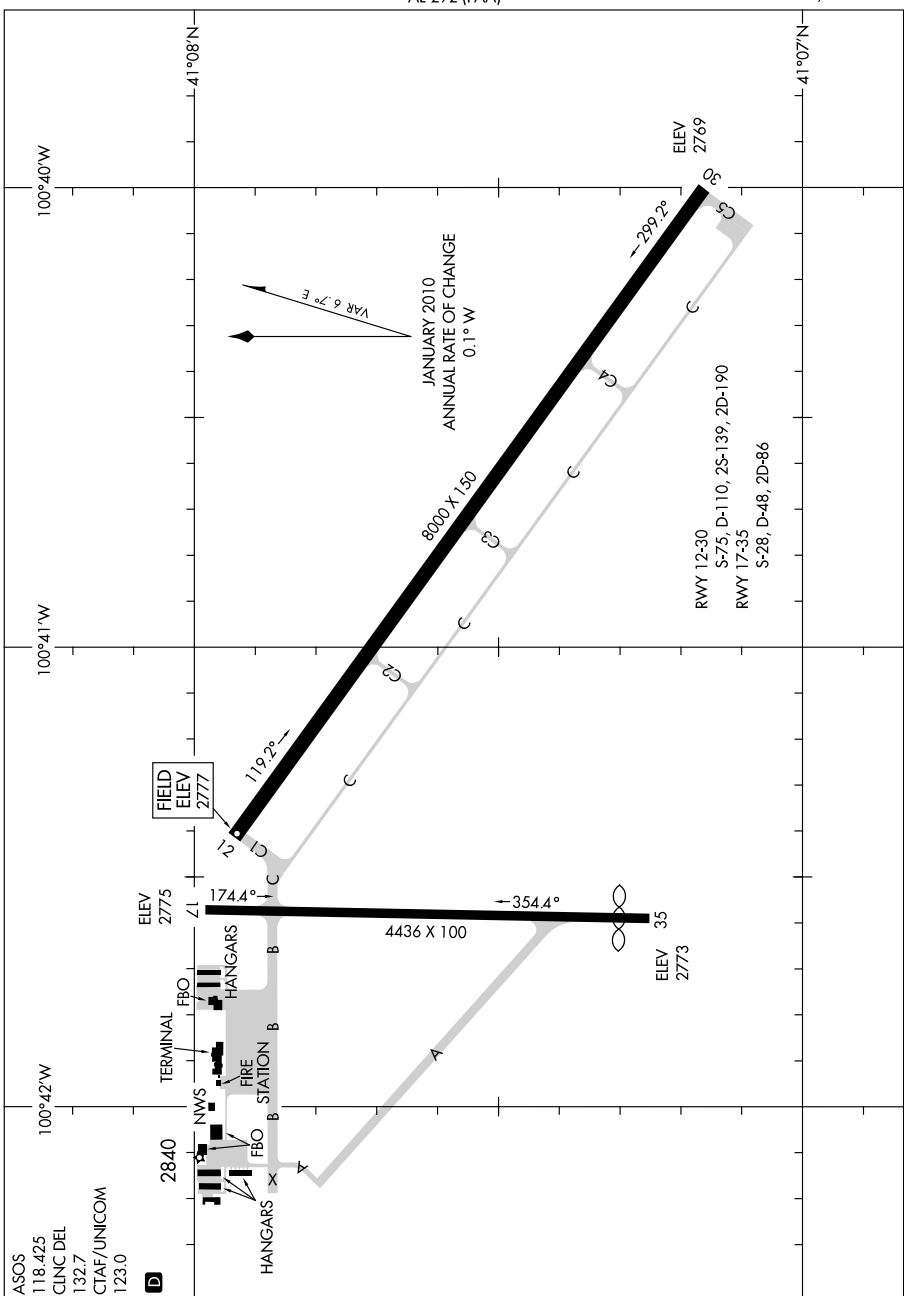
AIRPORT DIAGRAM
10210

NORFOLK, NEBRASKA
NORFOLK/KARL STEFAN MEMORIAL (OFK)

10210

AIRPORT DIAGRAM

NORTH PLATTE RGNL AIRPORT LEE BIRD FIELD (LBF)
AL-292 (FAA) NORTH PLATTE, NEBRASKA



AIRPORT DIAGRAM

NORTH PLATTE, NEBRASKA
NORTH PLATTE RGNL AIRPORT LEE BIRD FIELD (LBF)

10210

NC. 23 SEP 2010 to 18 NOV 2010

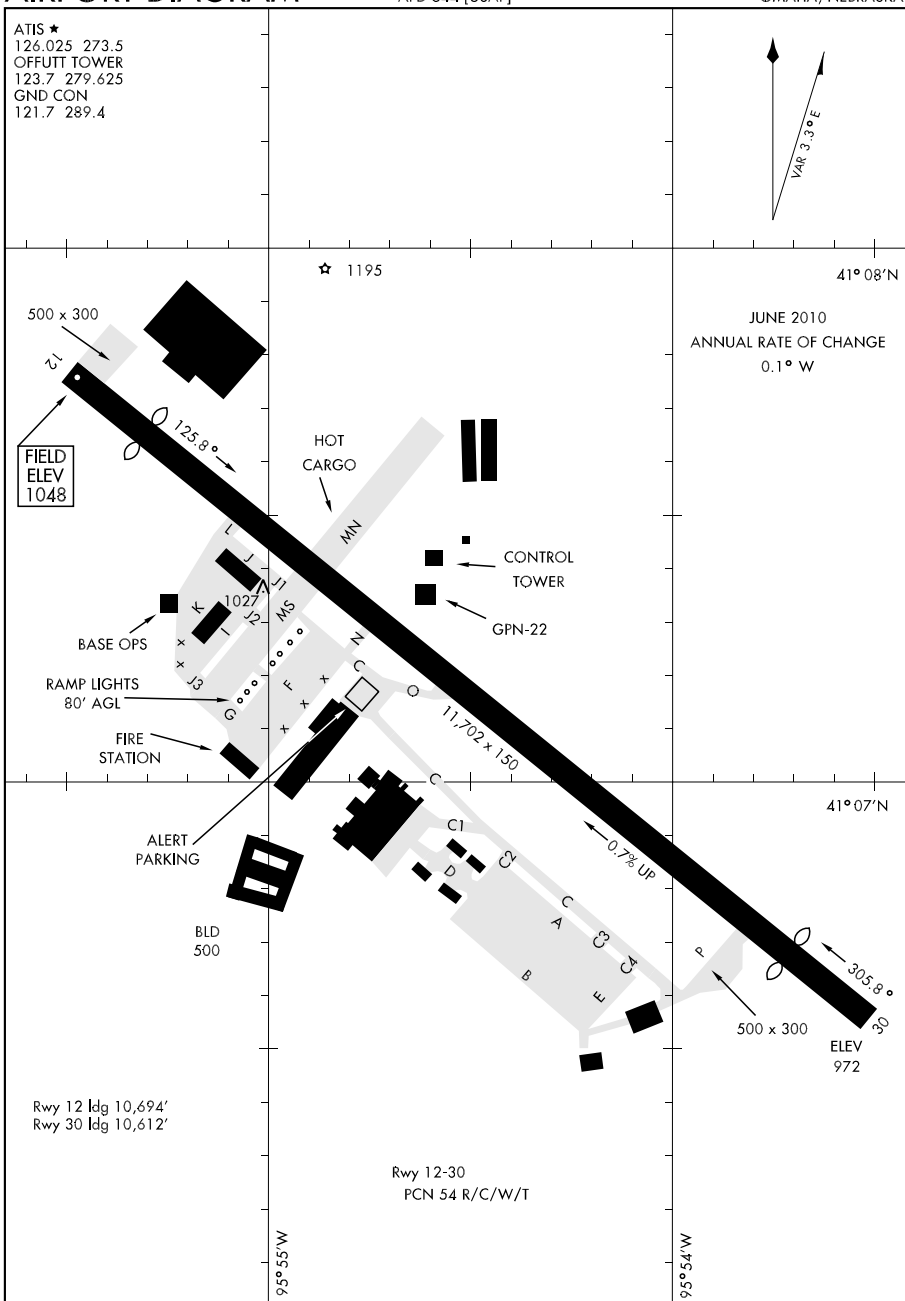
10154

OFFUTT AFB (KOFF)

AIRPORT DIAGRAM

AFD-544 [USAF]

OMAHA, NEBRASKA



AIRPORT DIAGRAM

OMAHA, NEBRASKA
OFFUTT AFB (KOFF)

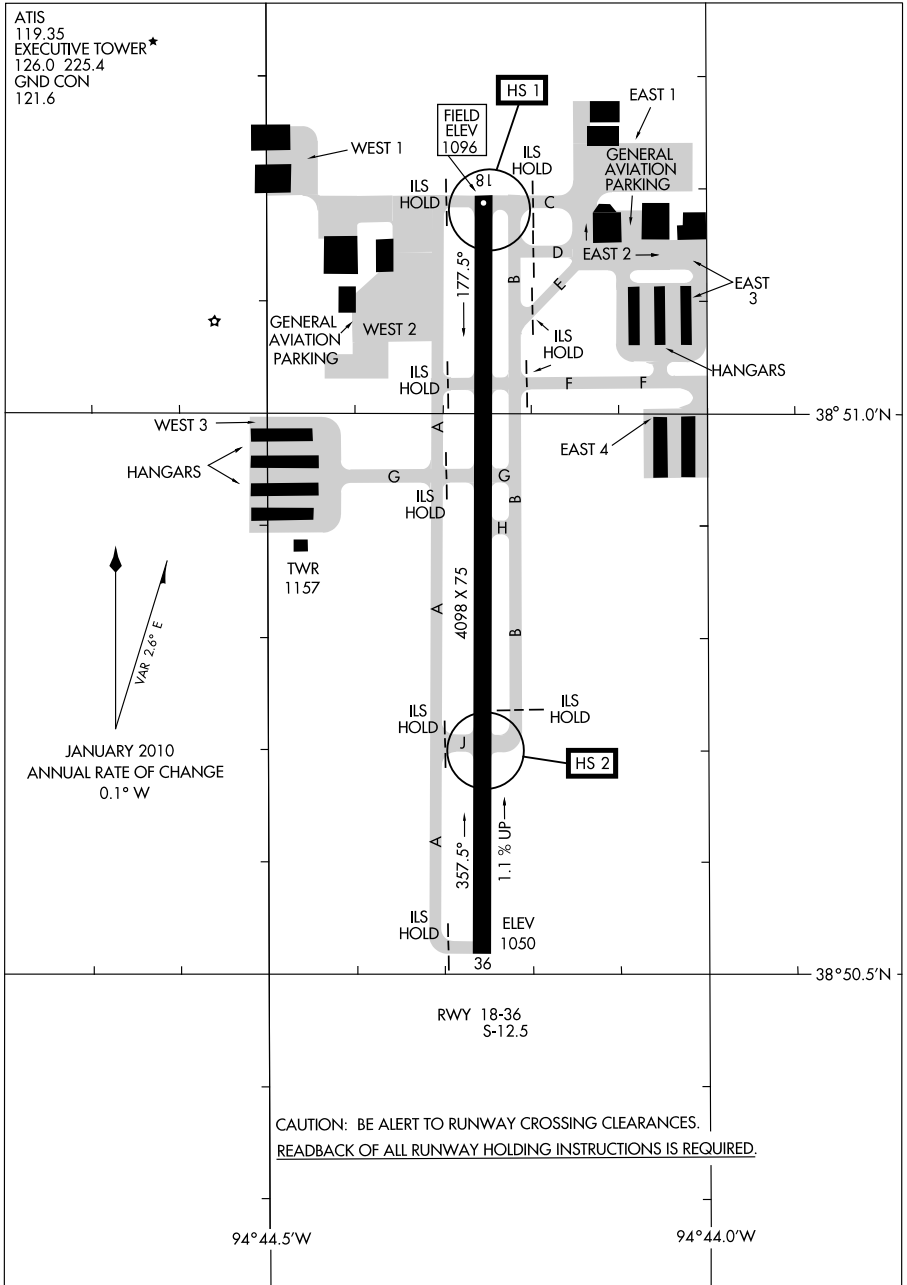
NC, 23 SEP 2010 to 18 NOV 2010

10266

AIRPORT DIAGRAM

AL-5687 (FAA)

OLATHE/JOHNSON COUNTY EXECUTIVE (OJC)
OLATHE, KANSAS



AIRPORT DIAGRAM

10266

OLATHE, KANSAS
OLATHE/JOHNSON COUNTY EXECUTIVE (OJC)

NC. 23 SEP 2010 to 18 NOV 2010

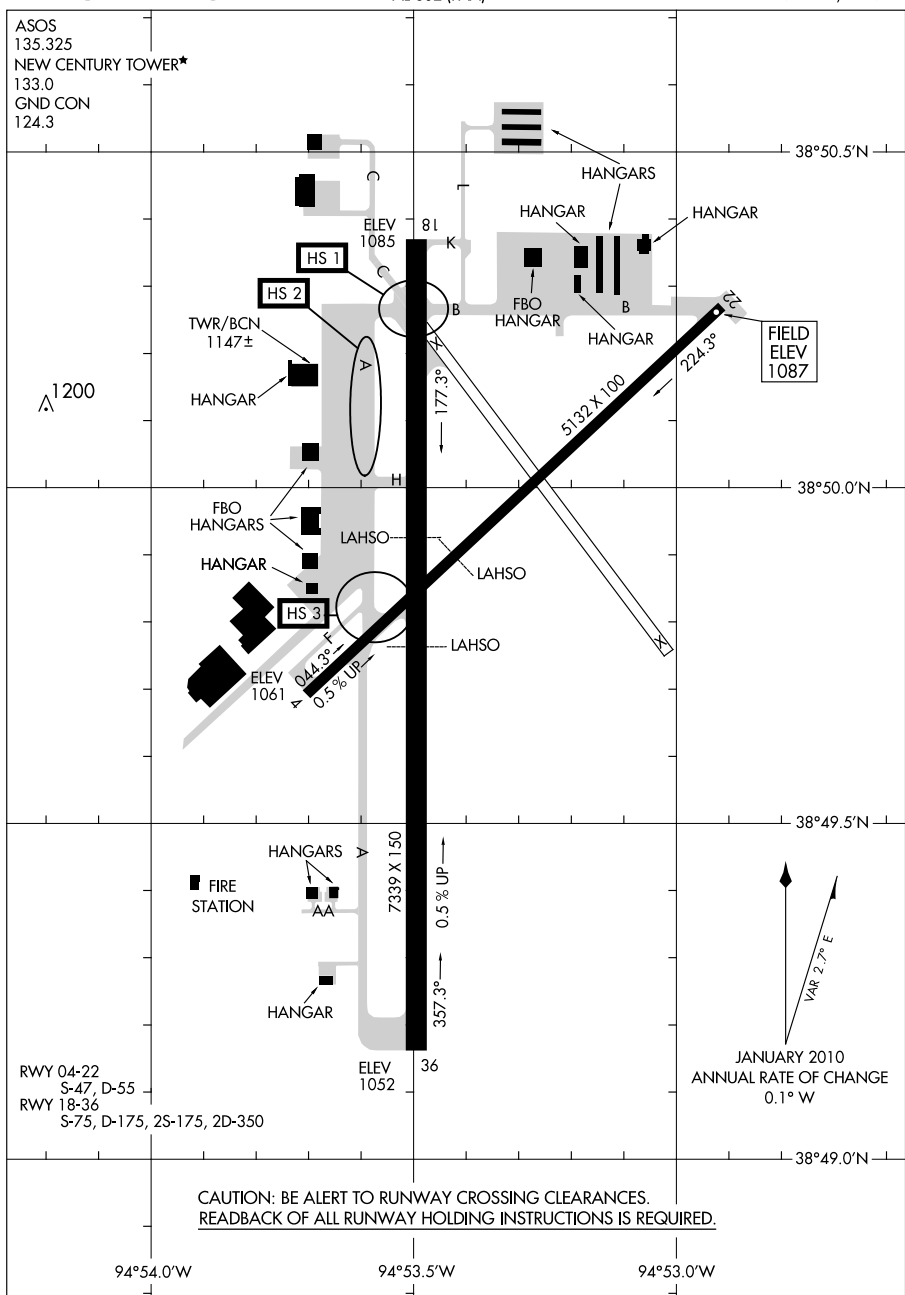
10266

AIRPORT DIAGRAM

OLATHE/NEW CENTURY AIRCENTER (IXD)
OLATHE, KANSAS

OLATHE, KANSAS

AL-302 (FAA)



AIRPORT DIAGRAM

OLATHE, KANSAS
OLATHE/NEW CENTURY AIRCENTER (IXD)

OLATHE, KANSAS

10266

NC, 23 SEP 2010 to 18 NOV 2010

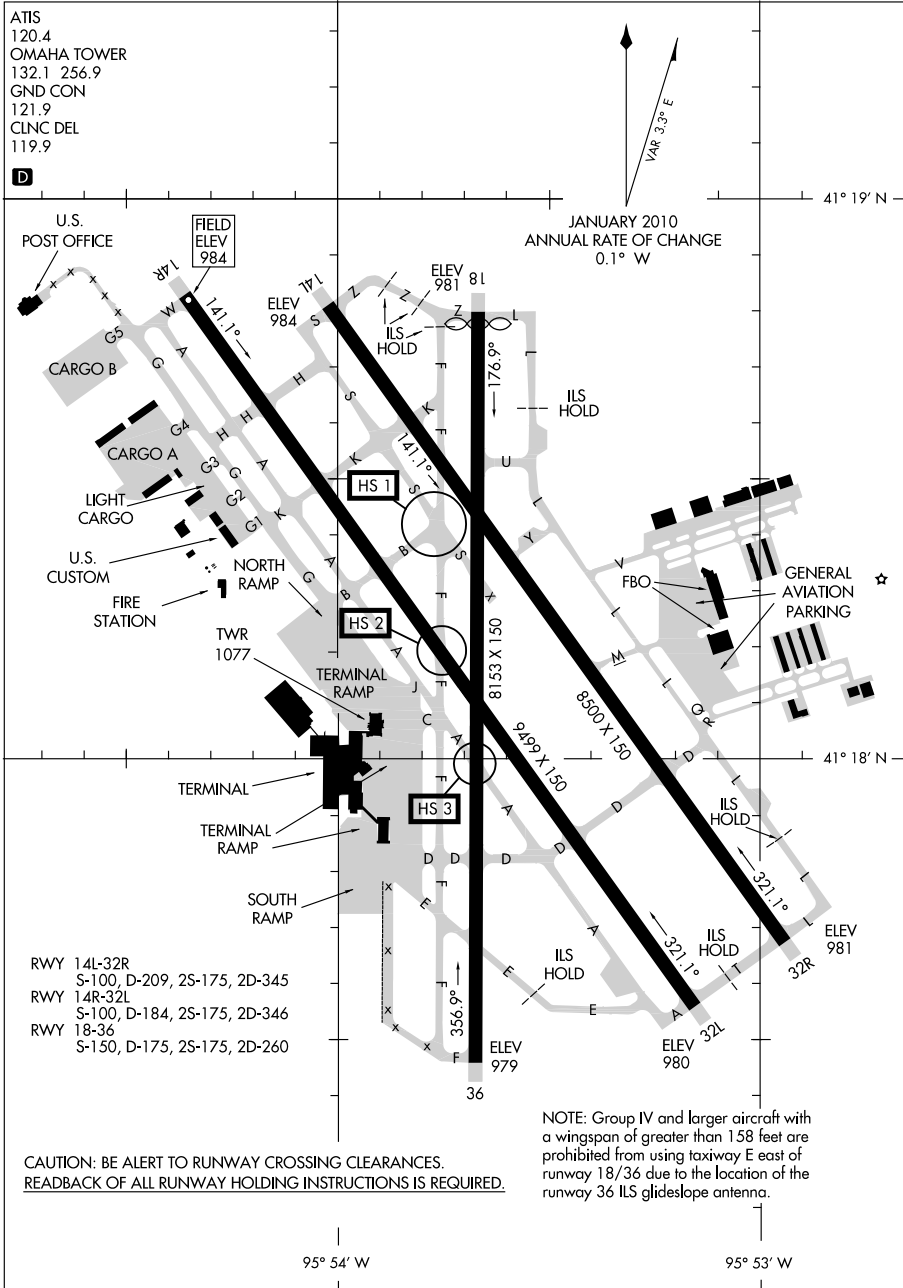
10266

AIRPORT DIAGRAM

AL-304 (FAA)

OMAHA/EPPLEY AIRFIELD (OMA)

OMAHA, NEBRASKA



AIRPORT DIAGRAM

10266

OMAHA, NEBRASKA

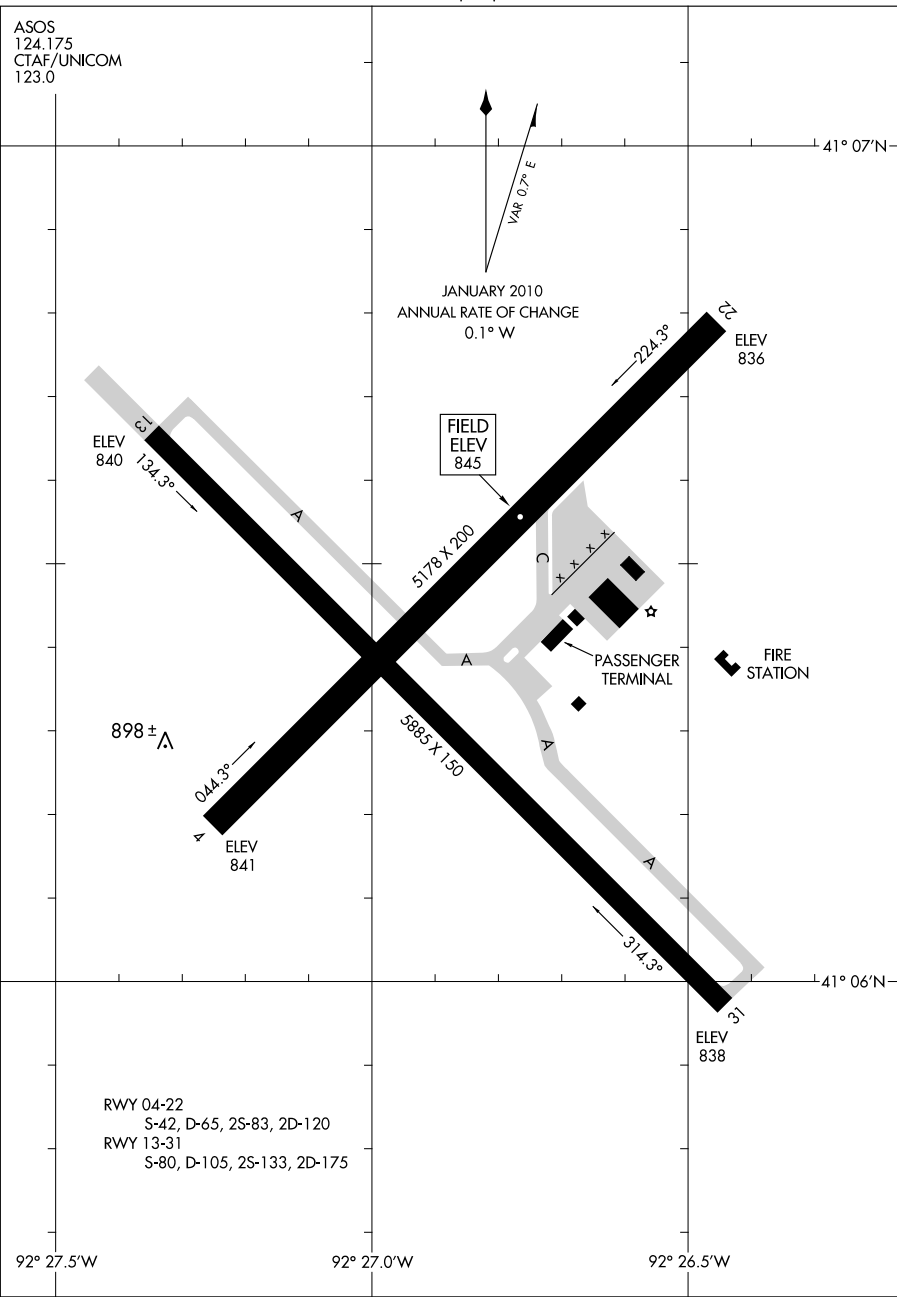
OMAHA/EPPLEY AIRFIELD (OMA)

AIRPORT DIAGRAM

ASOS
124.175
CTAF/UNICOM
123.0

AL-915 (FAA)

OTTUMWA RGNL (OTM)
OTTUMWA, IOWA



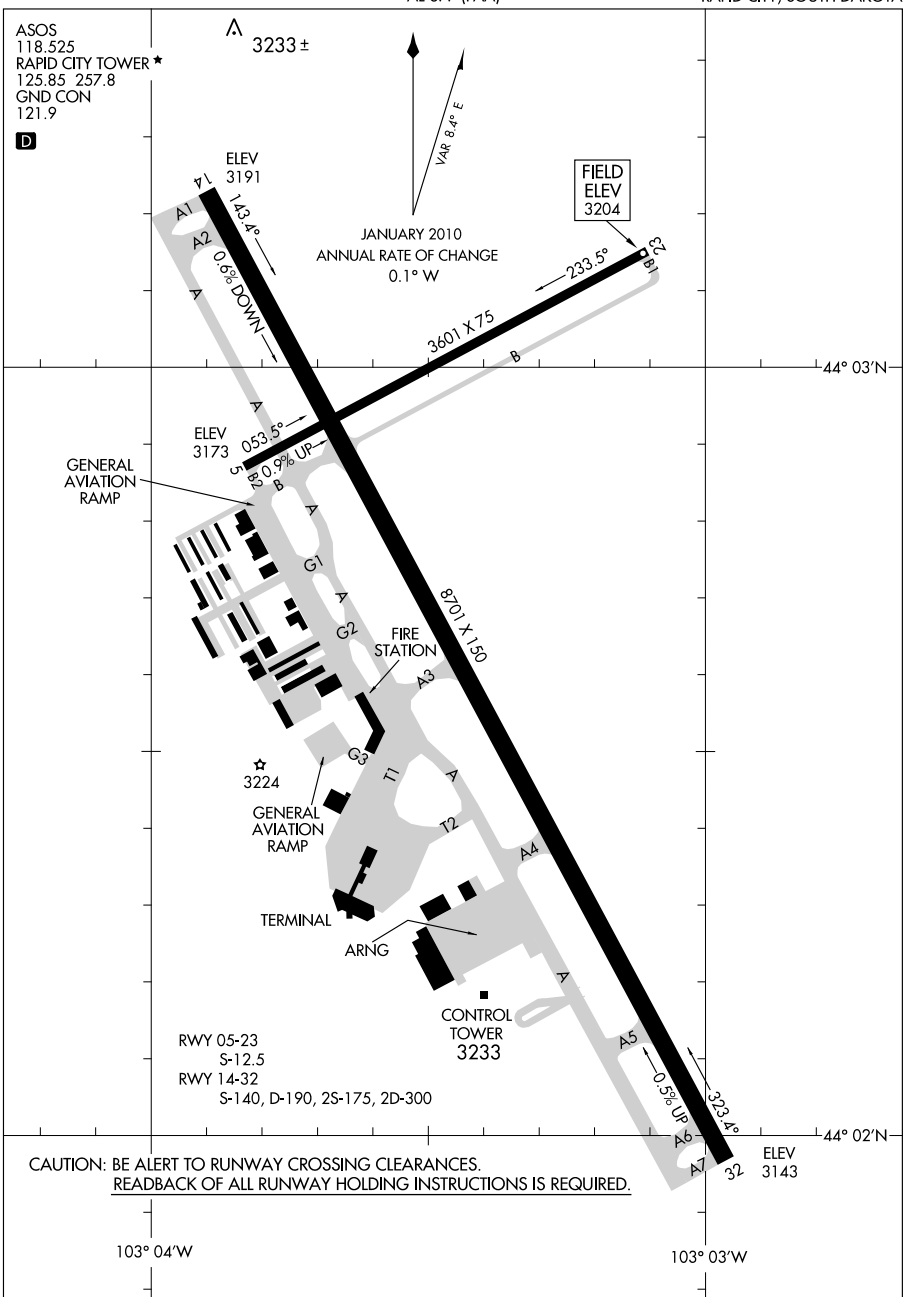
AIRPORT DIAGRAM

OTTUMWA, IOWA
OTTUMWA RGNL (OTM)

10210

AIRPORT DIAGRAM

RAPID CITY RGNL (R.A.P.)
RAPID CITY, SOUTH DAKOTA



AIRPORT DIAGRAM

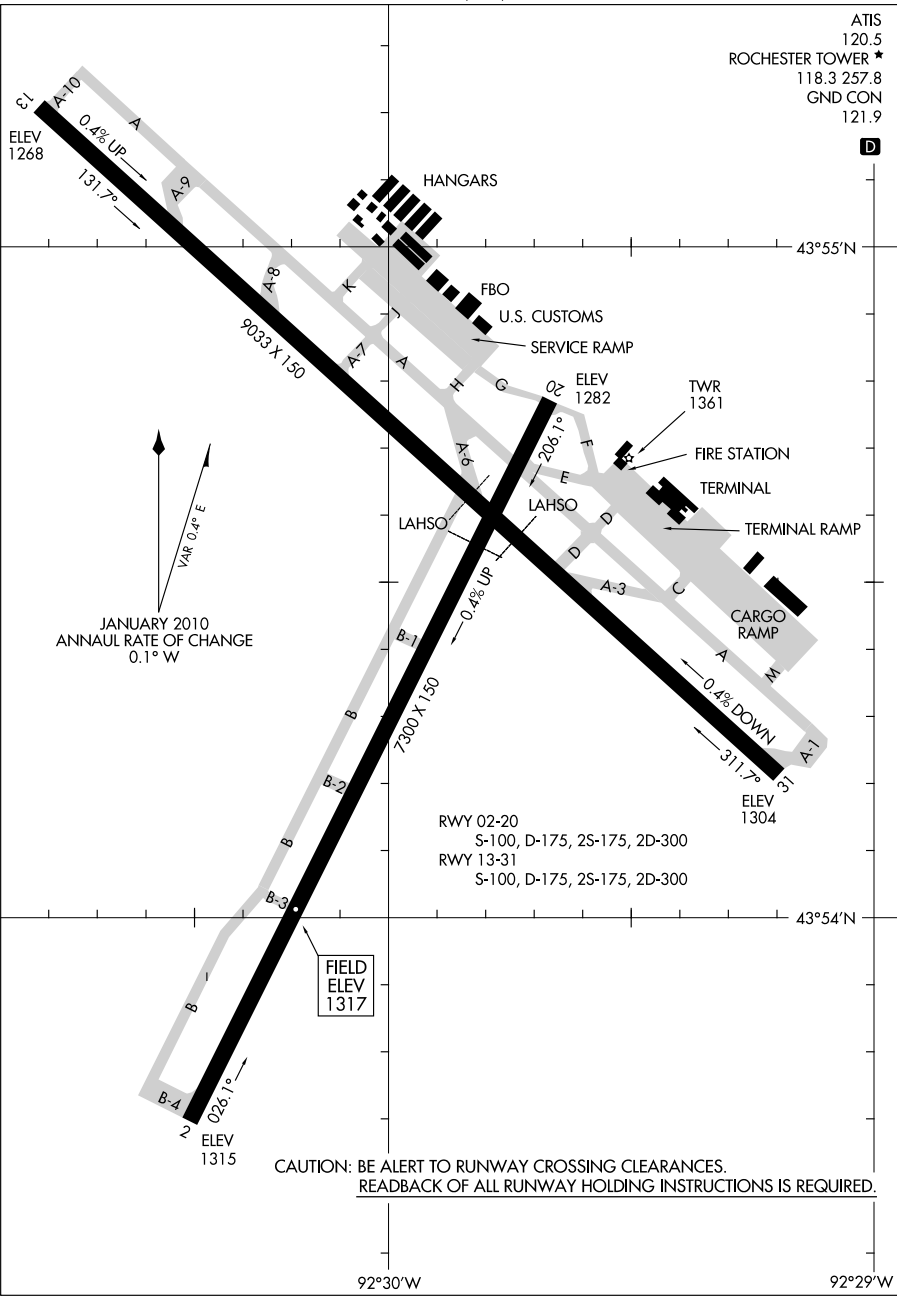
RAPID CITY, SOUTH DAKOTA
RAPID CITY RGNL (R.A.P.)

10210

AIRPORT DIAGRAM

AL-5041 (FAA)

ROCHESTER INTL (RST)
ROCHESTER, MINNESOTA



AIRPORT DIAGRAM

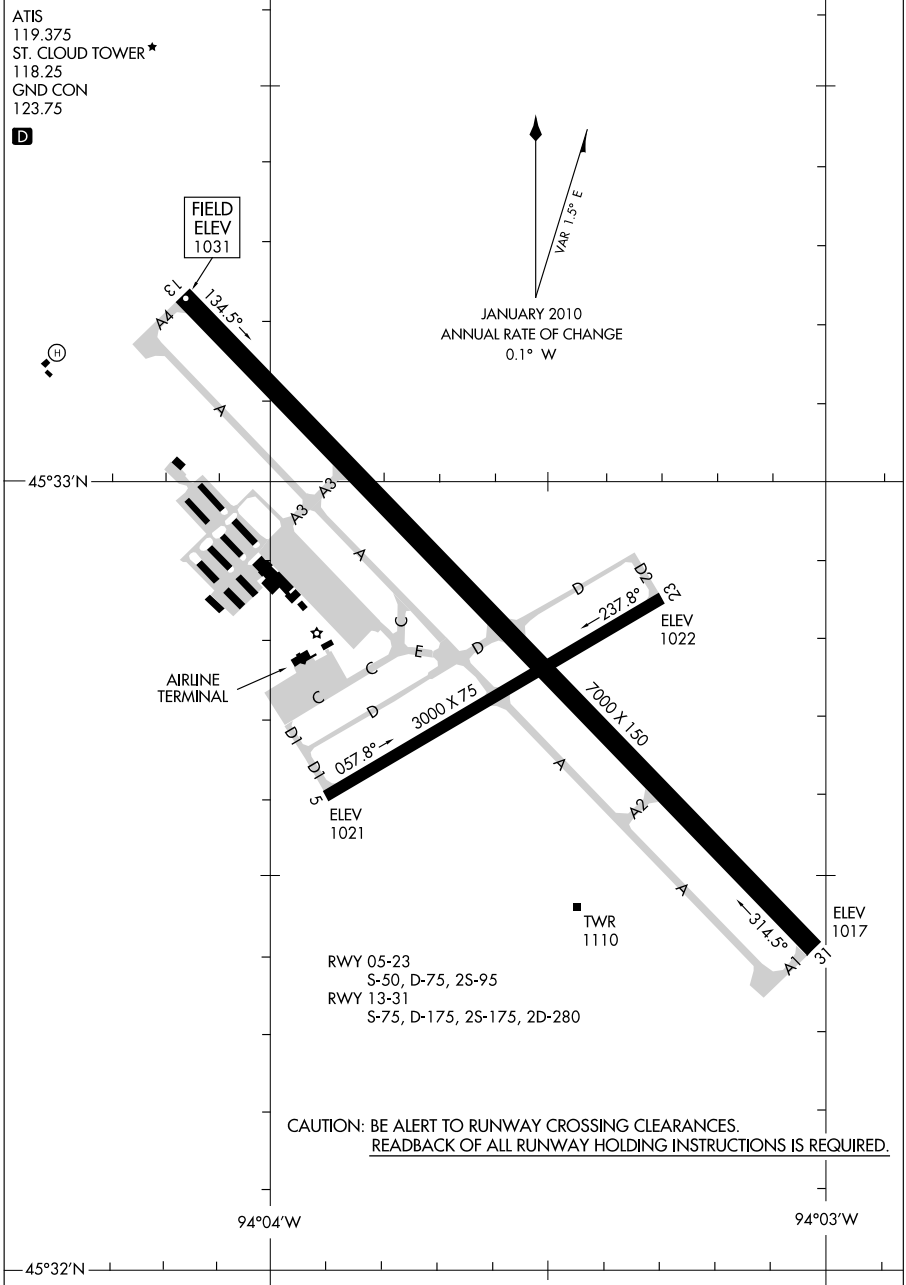
ROCHESTER, MINNESOTA
ROCHESTER INTL (RST)

10210

AIRPORT DIAGRAM

AL-5799 (FAA)

ST. CLOUD RGNL (STC)
ST. CLOUD, MINNESOTA



AIRPORT DIAGRAM

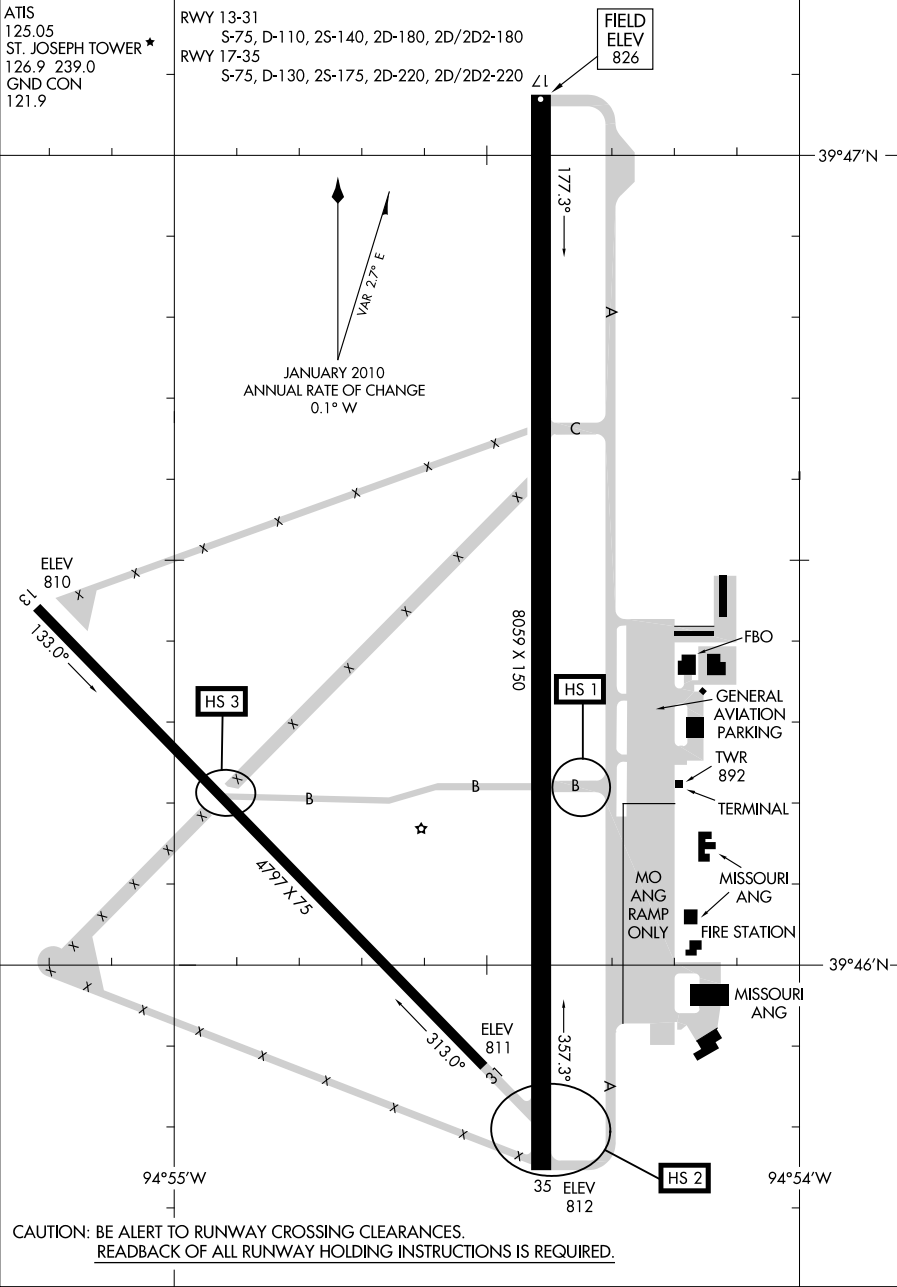
10210

ST. CLOUD, MINNESOTA
ST. CLOUD RGNL (STC)

AIRPORT DIAGRAM

AL-359 (FAA)

ST. JOSEPH/ROSECRANS MEMORIAL (STJ)
ST. JOSEPH, MISSOURI



AIRPORT DIAGRAM

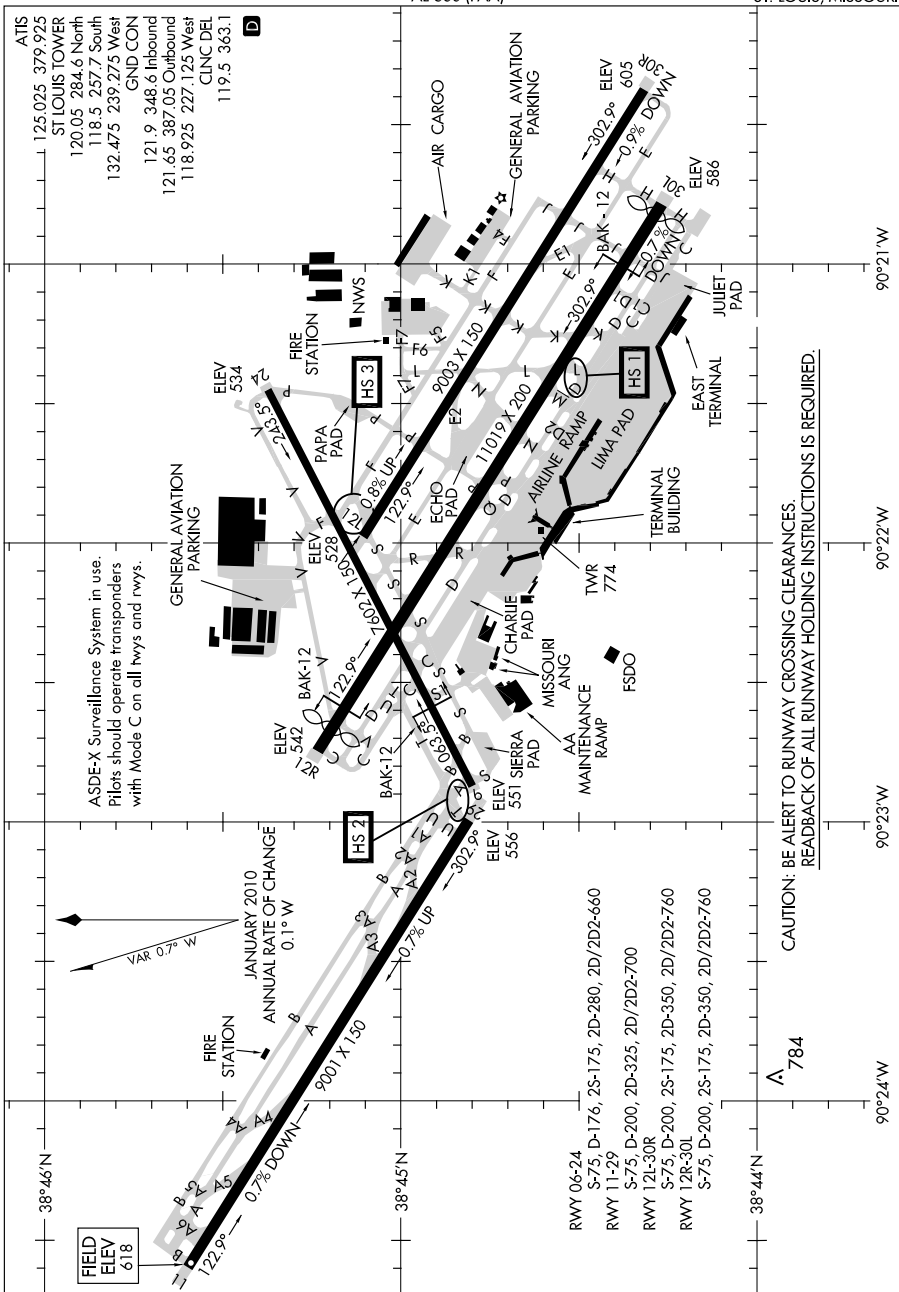
ST. JOSEPH, MISSOURI
ST. JOSEPH/ROSECRANS MEMORIAL (STJ)

10266

AIRPORT DIAGRAM

ST. LOUIS/ LAMBERT-ST. LOUIS INTL (STL)

ST. LOUIS, MISSOURI



ST. LOUIS, MISSOURI

ST. LOUIS/LAMBERT-ST. LOUIS INTL (STL)

10266

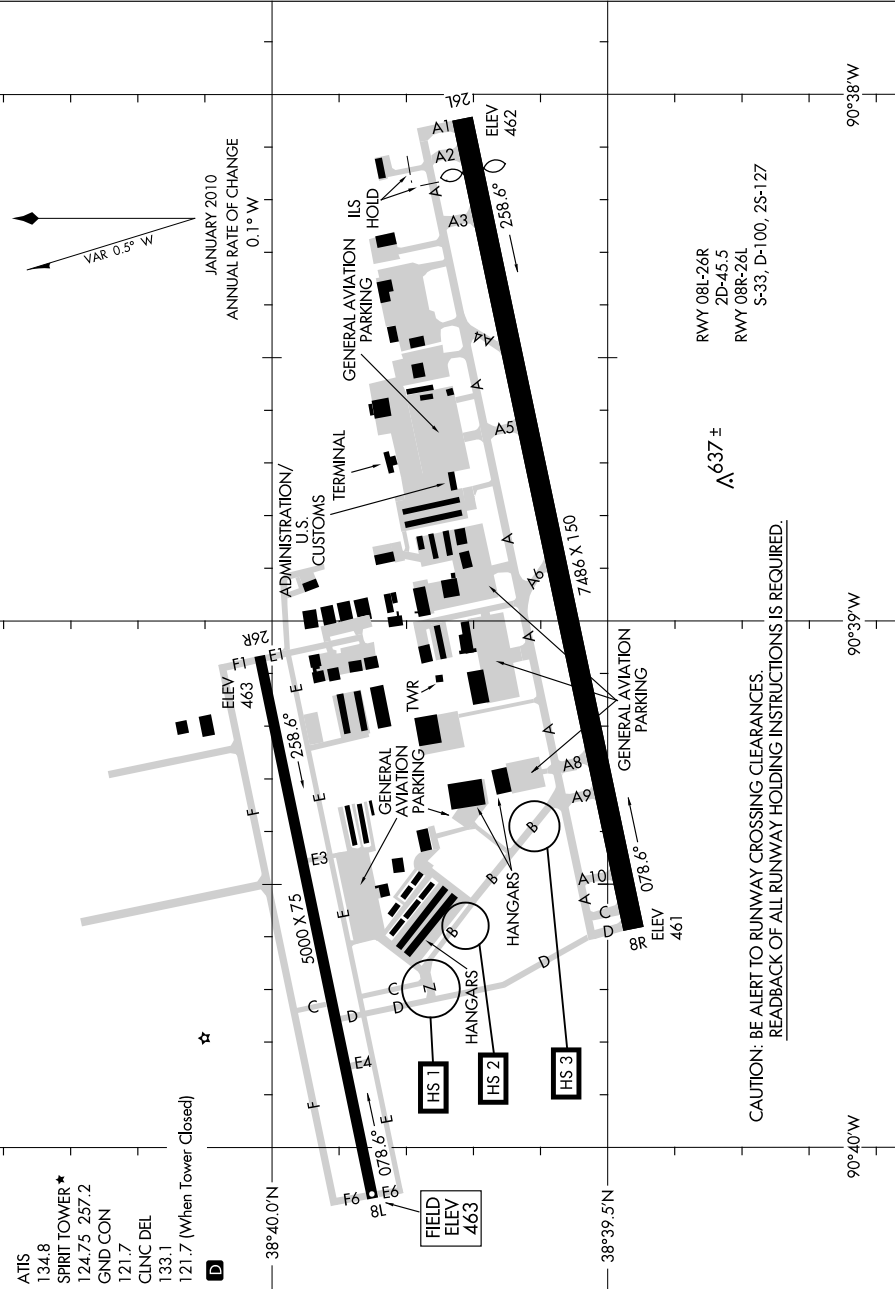
NC, 23 SEP 2010 to 18 NOV 2010

10266

AIRPORT DIAGRAM

AL-5400 (FAA)

ST. LOUIS/ SPIRIT OF ST. LOUIS (SUS)
ST. LOUIS, MISSOURI



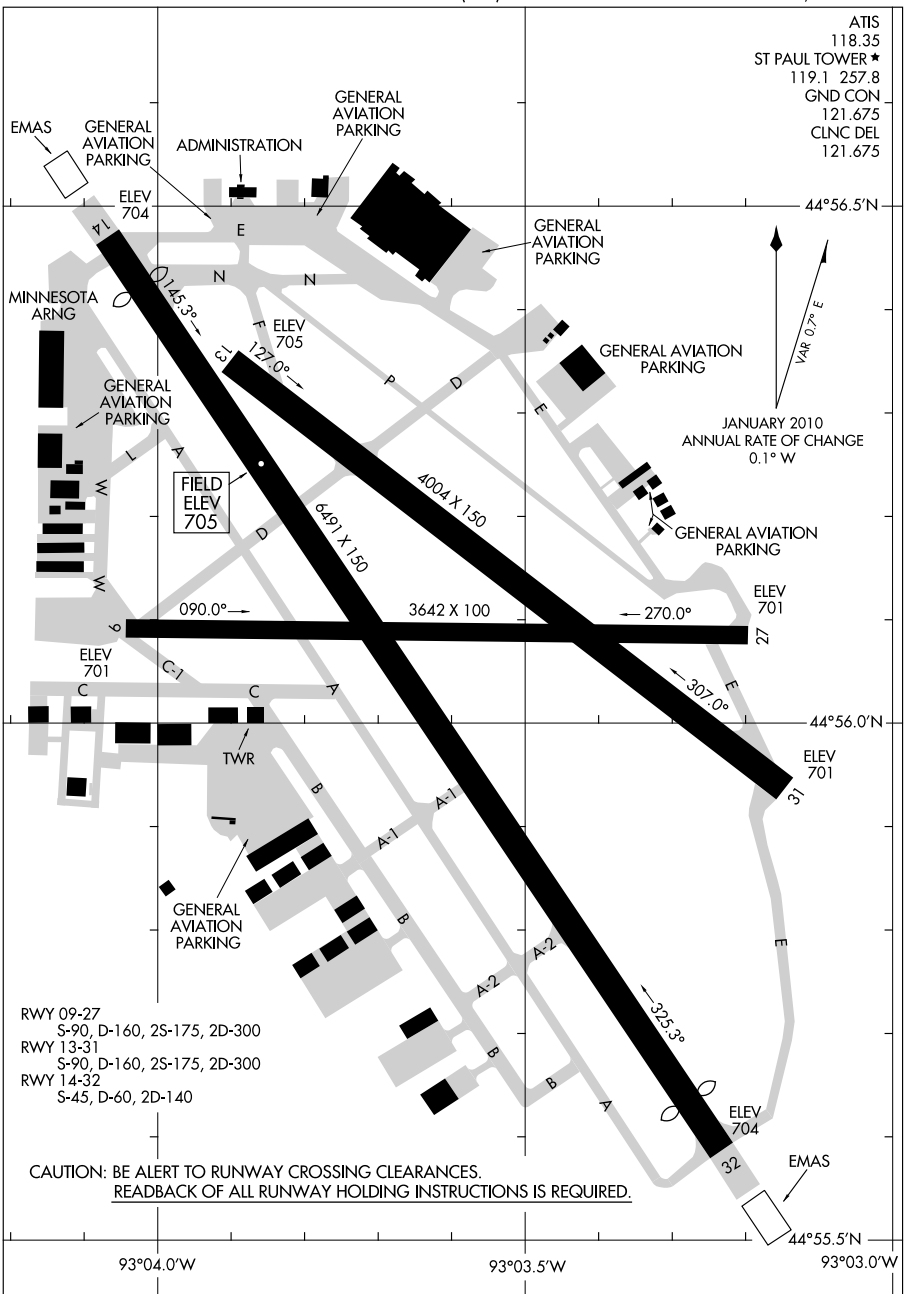
AIRPORT DIAGRAM

10266

ST. LOUIS, MISSOURI
ST. LOUIS/ SPIRIT OF ST. LOUIS (SUS)

10210
AIRPORT DIAGRAM

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)
AL-263 (FAA) ST. PAUL, MINNESOTA



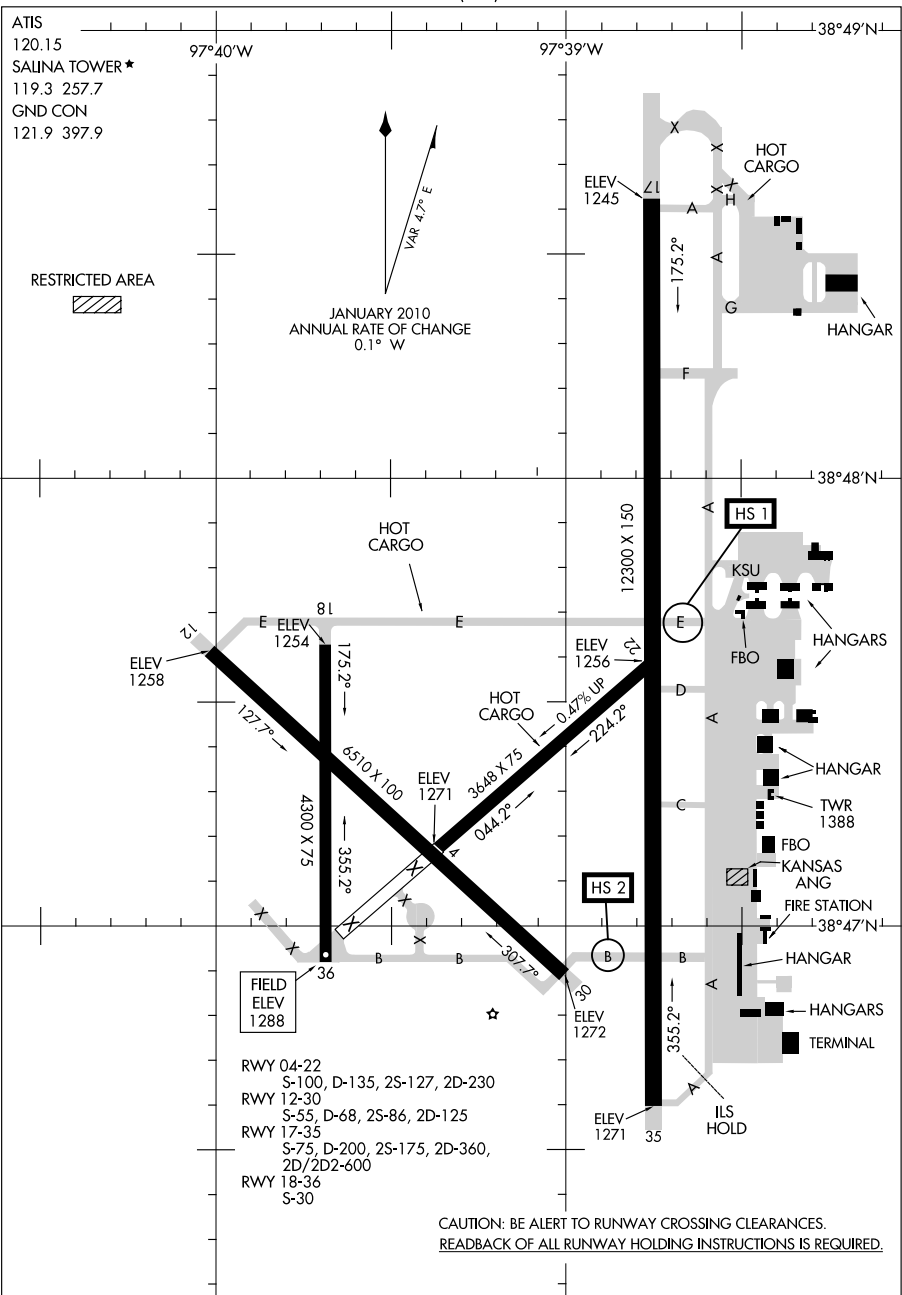
10210
AIRPORT DIAGRAM

ST. PAUL, MINNESOTA
ST. PAUL DOWNTOWN HOLMAN FIELD (STP)

AIRPORT DIAGRAM

AL-362 (FAA)

SALINA MUNI (SLN)
SALINA, KANSAS



AIRPORT DIAGRAM

10266

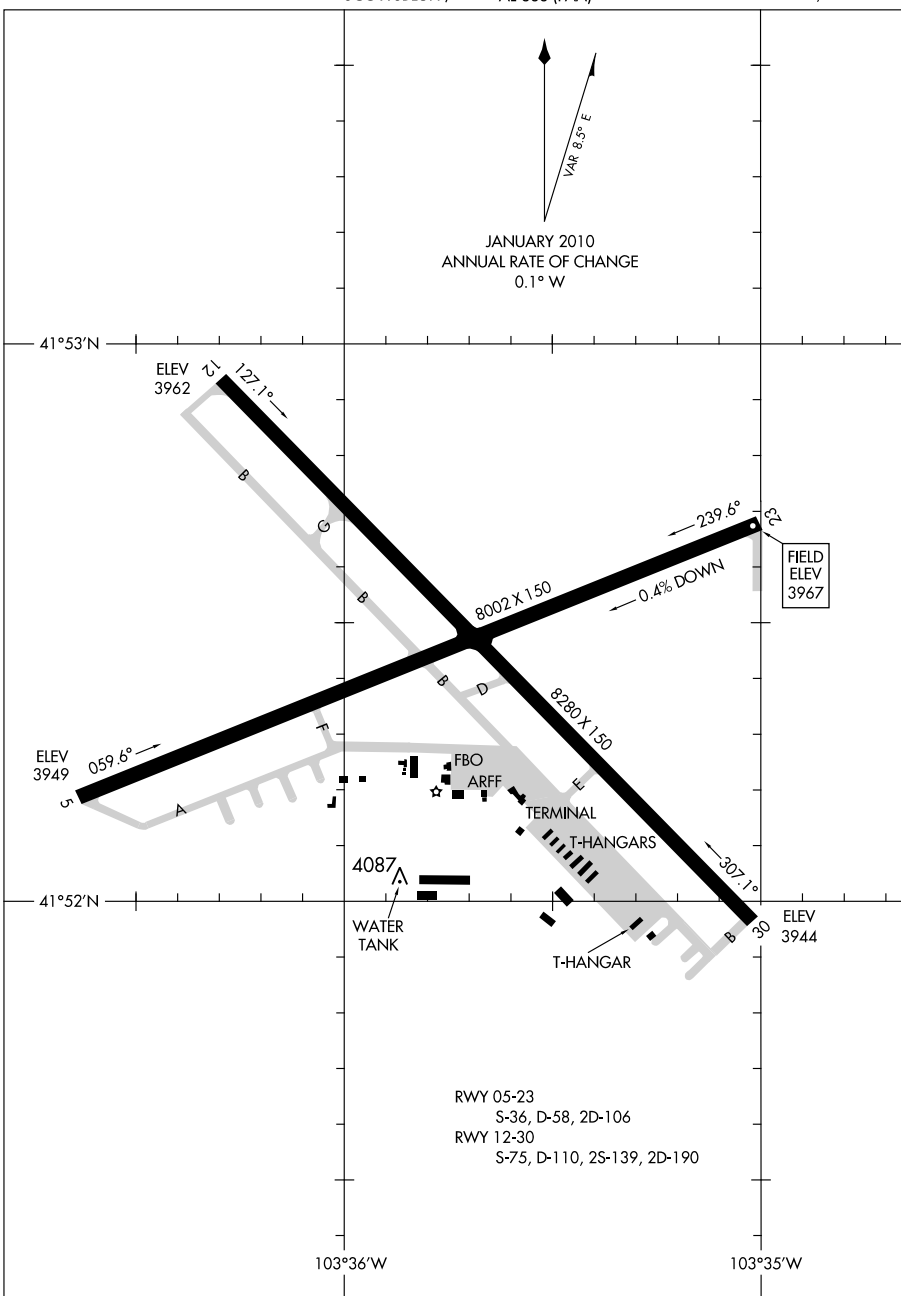
SALINA, KANSAS
SALINA MUNI (SLN)

NC, 23 SEP 2010 to 18 NOV 2010

10210

AIRPORT DIAGRAM

WESTERN NEBRASKA RGNL/WILLIAM B. HEILIG FIELD (B'F'F)
SCOTTSBLUFF/ AL-383 (FAA) SCOTTSBLUFF, NEBRASKA



AIRPORT DIAGRAM

10210

SCOTTSBLUFF/
WESTERN NEBRASKA RGNL/WILLIAM B. HEILIG FIELD (B'F'F)

SCOTTSBLUFF, NEBRASKA

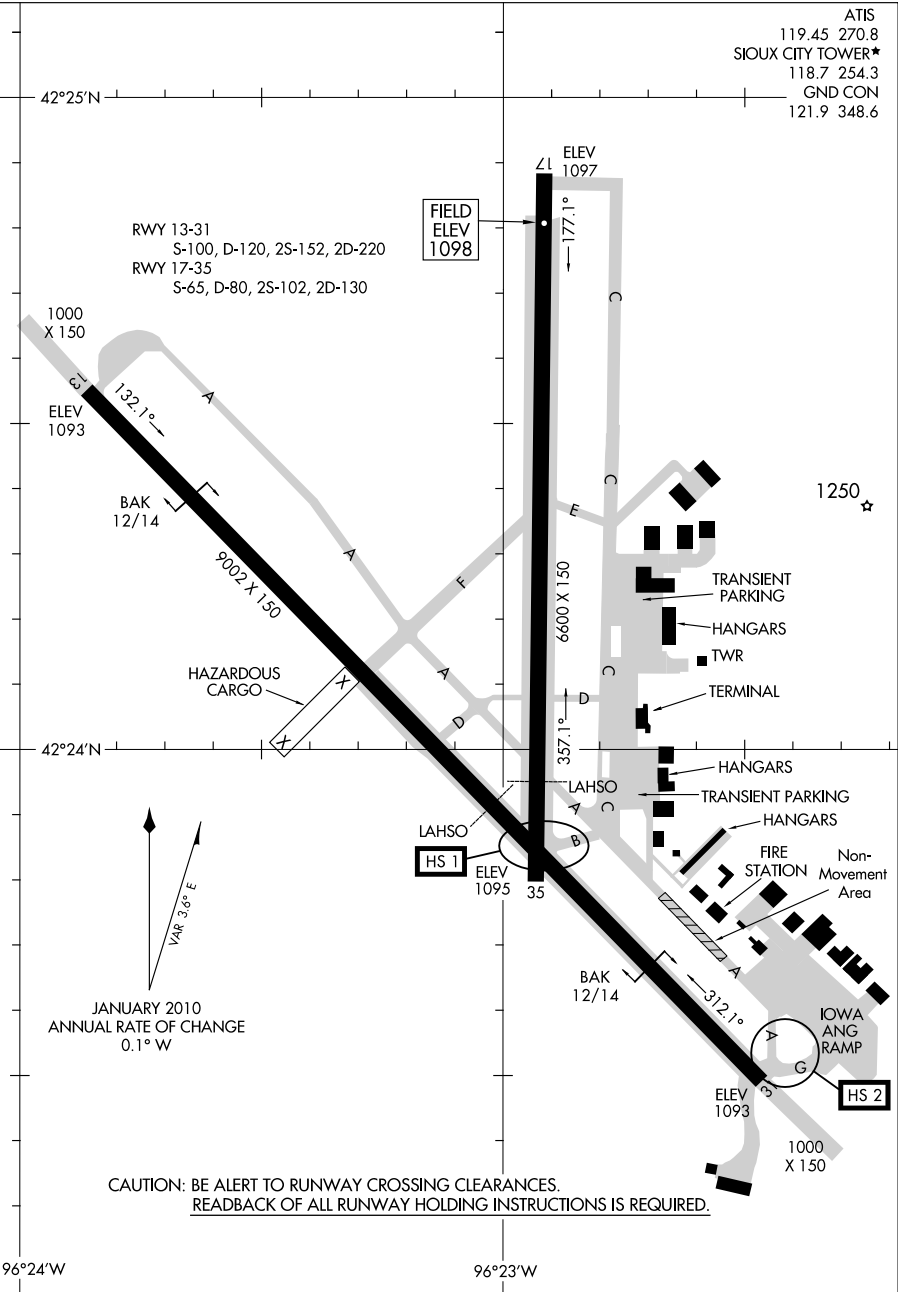
10266

AIRPORT DIAGRAM

SIoux GATeway/Colonel Bud Day Field (SUx)

AL-395 (FAA)

SIoux City, Iowa



AIRPORT DIAGRAM

10266

SIoux GATeway/Colonel Bud Day Field (SUx)

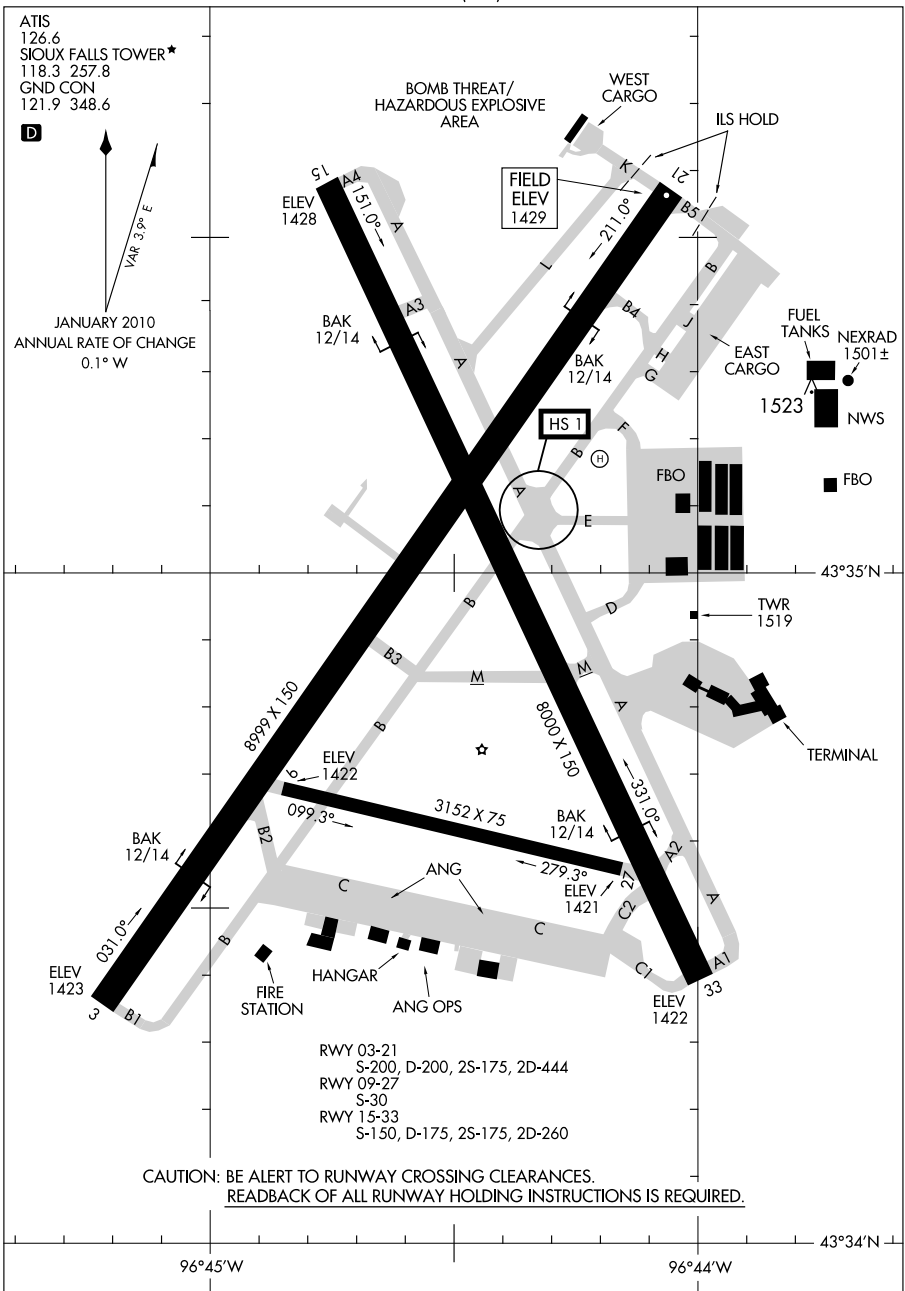
SIoux City, Iowa

10266

AIRPORT DIAGRAM

AL-396 (FAA)

SIOUX FALLS/JOE FOSS FIELD (FSD)
SIOUX FALLS, SOUTH DAKOTA



AIRPORT DIAGRAM

SIOUX FALLS, SOUTH DAKOTA
SIOUX FALLS/JOE FOSS FIELD (FSD)

10266

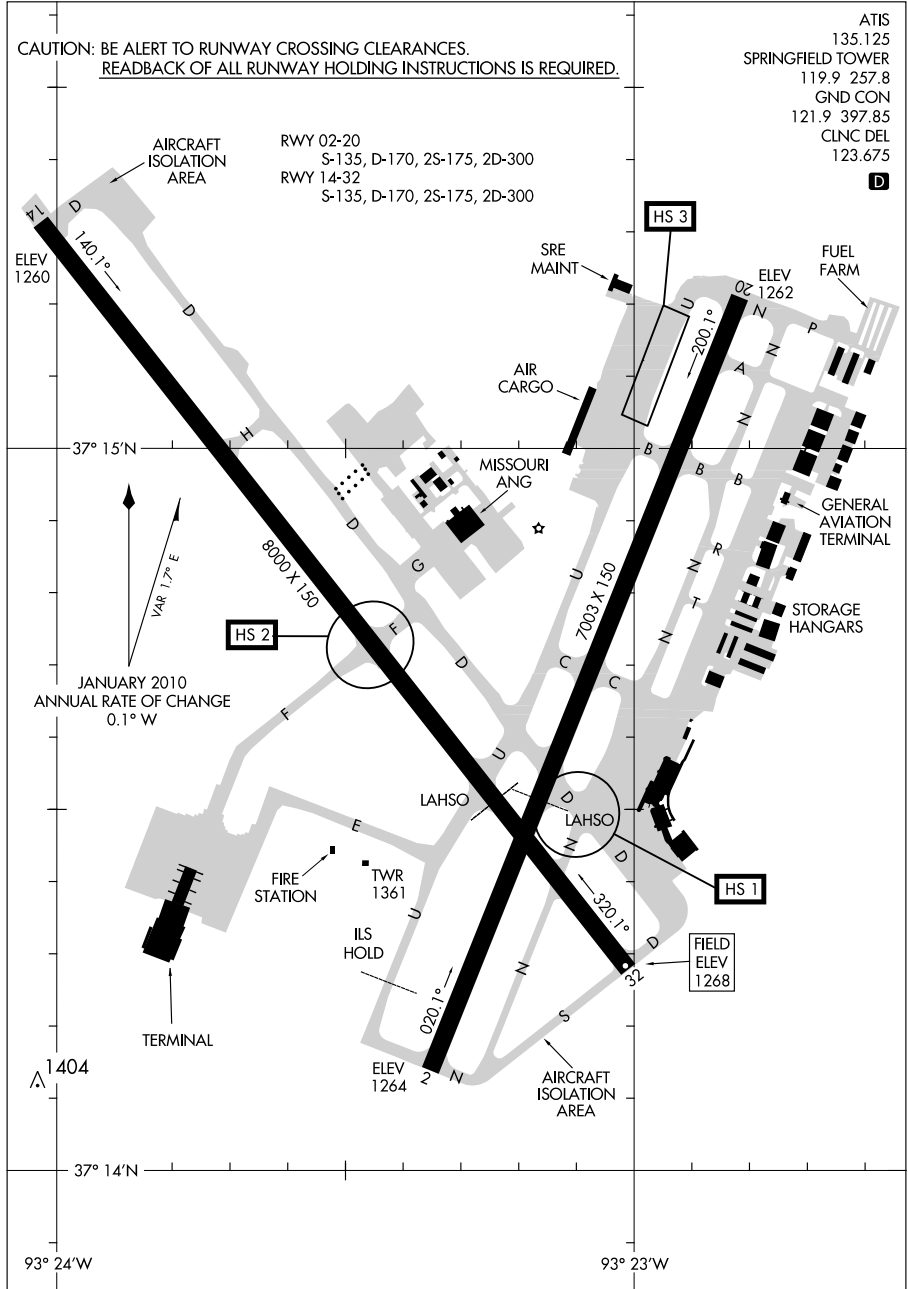
NC. 23 SEP 2010 to 18 NOV 2010

10266

AIRPORT DIAGRAM

AL-604 (FAA)

SPRINGFIELD-BRANSON NATIONAL (SGF)
SPRINGFIELD, MISSOURI



AIRPORT DIAGRAM

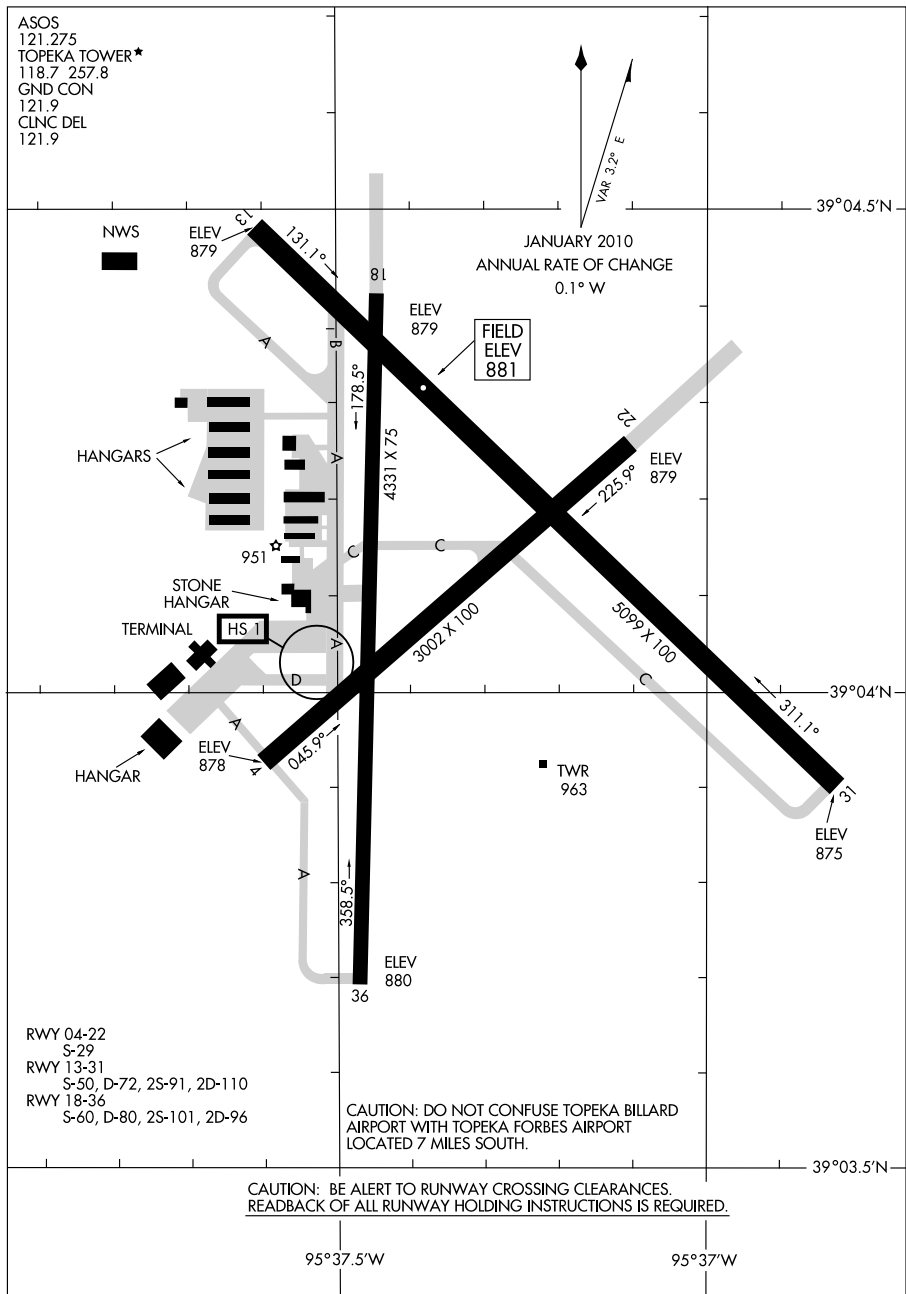
10266

SPRINGFIELD, MISSOURI
SPRINGFIELD-BRANSON NATIONAL (SGF)

AIRPORT DIAGRAM

AL-620 (FAA)

TOPEKA/PHILIP BILLARD MUNI (TOP)
TOPEKA, KANSAS



AIRPORT DIAGRAM

TOPEKA, KANSAS
TOPEKA/PHILIP BILLARD MUNI (TOP)

AIRPORT DIAGRAM

WATERLOO RGNL (ALO)
WATERLOO, IOWA

WATERLOO, IOWA
WATERLOO RGNL (ALO)

10266

NC, 23 SEP 2010 to 18 NOV 2010

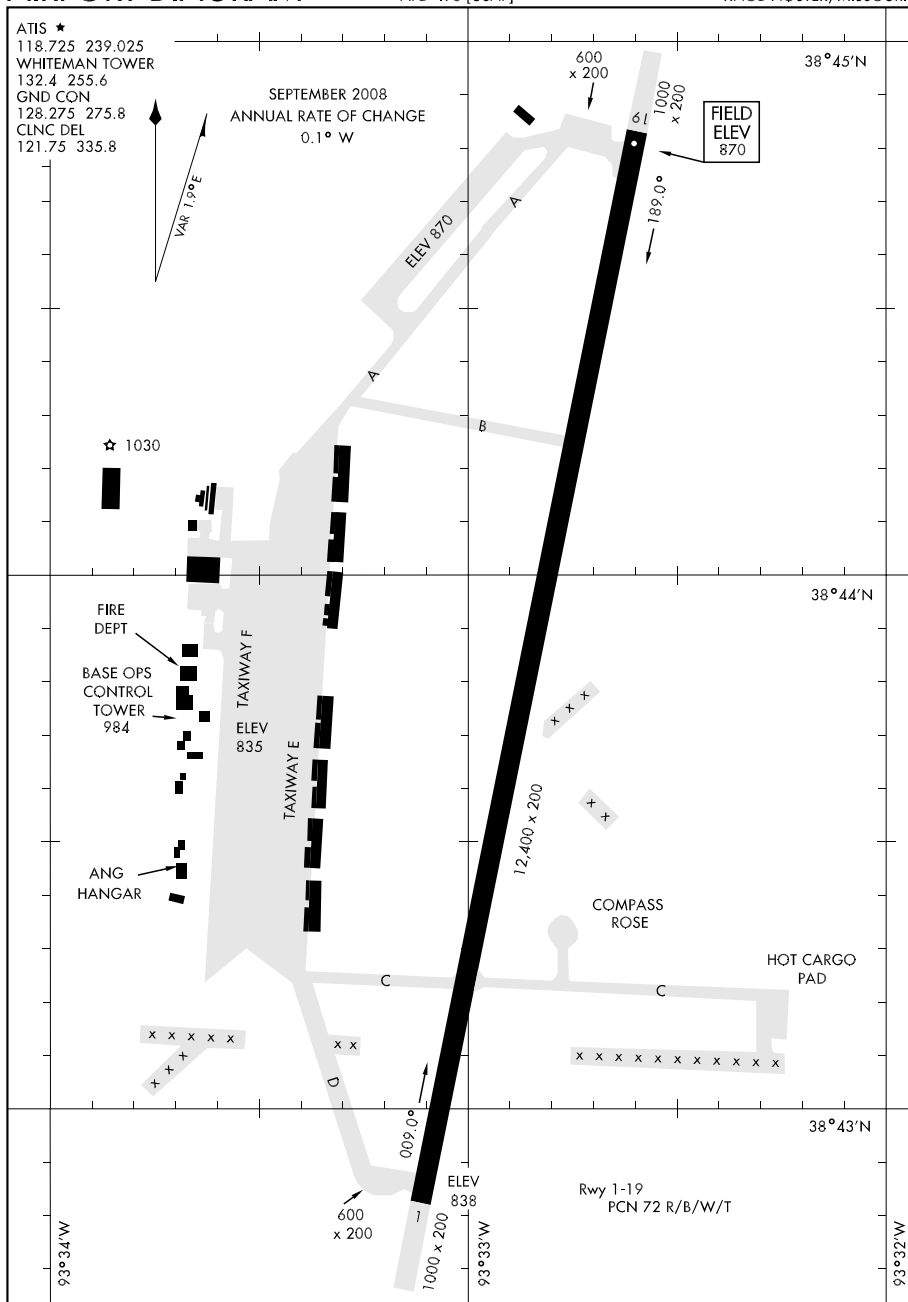
08325

WHITEMAN AFB (KSZL)

AIRPORT DIAGRAM

AFD-496 [USAF]

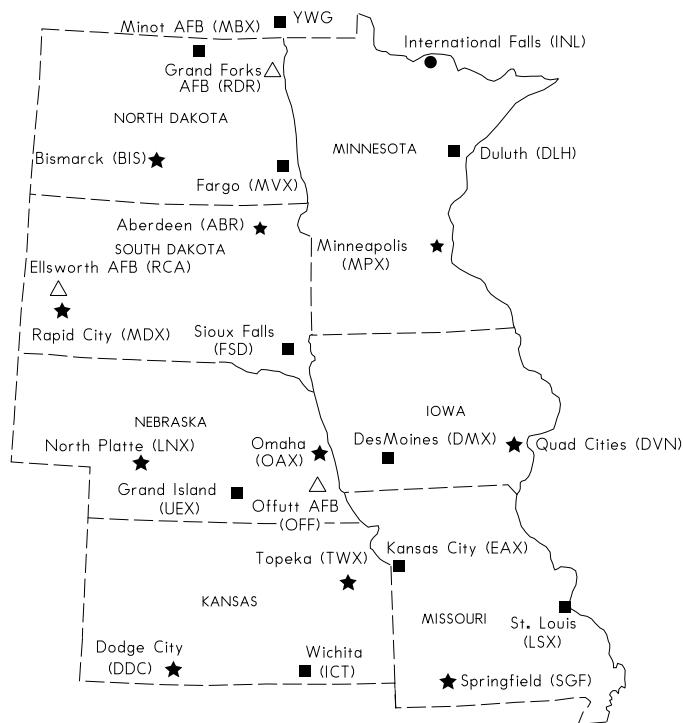
KNOB NOSTER, MISSOURI



AIRPORT DIAGRAM

KNOB NOSTER, MISSOURI
 WHITEMAN AFB (KSZL)

NATIONAL WEATHER SERVICE (NWS) UPPER AIR OBSERVING STATIONS (UAOS) AND WEATHER RADAR NETWORK



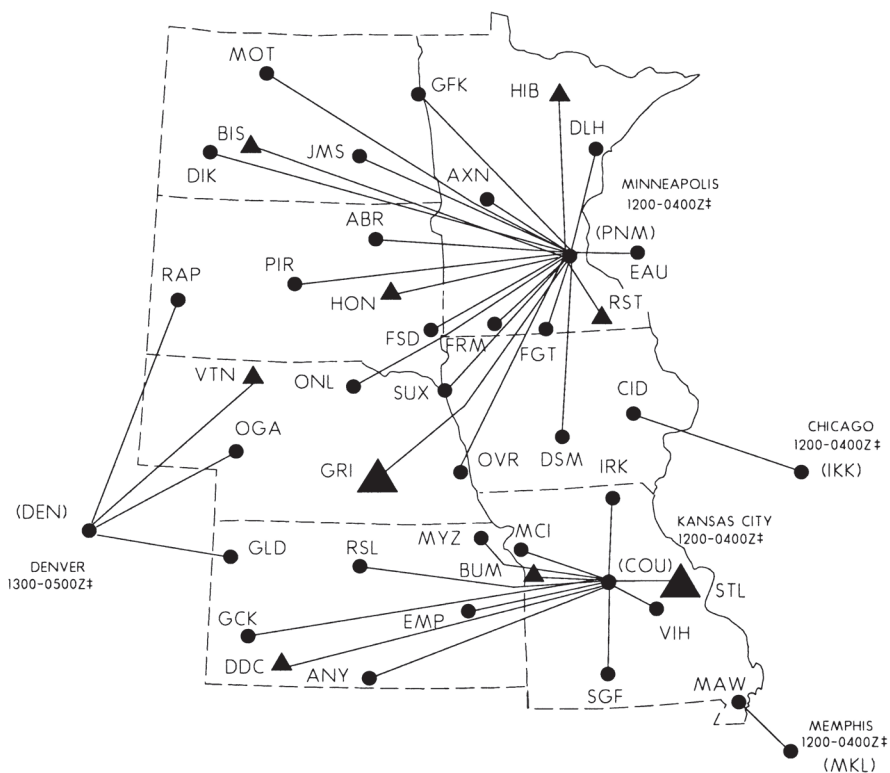
LEGEND

- △ AVIATION WEATHER SERVICE (MILITARY)
- ▲ AIR TRAFFIC CONTROL RADAR
- ★ UPPER AIR OBSERVING STATION/RADAR
- RADAR ONLY
- UAOS-BALLOON RELEASES AROUND 1100 UTC AND 2300 UTC DAILY
- OTHER NWS UPPER AIR STATIONS-BALLOON RELEASE TIMES ARE FLEXIBLE BUT GENERALLY AROUND SUNRISE AND/OR EARLY AFTERNOON

NOTE: FOR RELEASES LATER THAN 1130 UTC AND 2300 UTC, AND FOR SPECIAL RELEASES AT OTHER THAN THE SCHEDULED HOURS, AN AERONAUTICAL INFORMATION MESSAGE WILL BE FILED.

ENROUTE FLIGHT ADVISORY SERVICE (EFAS)

See Aeronautical Information Manual (AIM) for available services



DENVER EFAS HIGH ALTITUDE FREQUENCY 124.675

KANSAS CITY EFAS HIGH ALTITUDE FREQUENCY 123.625

MINNEAPOLIS EFAS HIGH ALTITUDE FREQUENCY 135.675

- LOW ALTITUDE COMMUNICATIONS OUTLET (122.0)
- ▲ HIGH ALTITUDE COMMUNICATIONS OUTLET
- BOTH LOW AND HIGH ALTITUDE COMMUNICATIONS OUTLET